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A Performance Review

California Department Of Corrections

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PREFACE

The General Fund budget for the California Department of Corrections (CDC) has been one of the fastest growing budgets in State government during the last ten years. Since 1985-86, the annual rate of growth in CDC's budget has been more than eight percent. With the enactment of the "Three Strikes" law in 1994, this growth rate is likely to continue.

With this rapid growth in expenditures has come increasing skepticism by various legislators that CDC management is doing all it can to minimize the cost of prison operations and the cost of constructing prisons. Because of concerns raised by the Legislature and the Administration's interest in minimizing the cost of State government, the Department of Finance decided to take a close look at the CDC's operations to determine if there were ways for CDC to conduct business, and build prisons, more economically and efficiently. This report is the result of that endeavor.

Our review began in November 1995. Initially, we contacted CDC staff and management to gain a better understanding of the Department's operations and its expenditure patterns. Later, we met with correctional experts, legislative staff, and budget staff and management of the Department of Finance to understand their interests in CDC's activities and expenditures. During those meetings, a number of issues surfaced, the most common ones being the cost of prison construction, CDC expenditures for inmate health care, the cost of program activities (such as education and work) and overtime expenses.

After further discussions with CDC staff and management regarding these and other issues, and after determining the availability of data with which to conduct our analysis, we decided to confine our evaluation to the following areas: (1) the costs of building California prisons, in particular the construction costs relative to those in other states; (2) CDC's expenditures on inmate health care; (3) prison management's use of overtime to fill vacant correctional officer positions; (4) CDC's process for classifying inmates into levels reflecting their varying needs for security and custody; and (5) alternative methods of meeting the State's needs for additional prison beds. Because of the short time frame established for the study, other areas of interest to legislative staff and Department of Finance budget staff had to be deferred for possible future study.

During our evaluation we spoke to numerous persons both inside and outside the Department of Corrections with knowledge of CDC operations, with representatives of other state departments of corrections, with operators of private prisons and their customers, with health care experts, with prison construction experts, and with inmate classification experts. We also visited 15 State prisons and conducted interviews with wardens, custody staff, classification staff, counselors and others regarding various

aspects of prison operations. We also visited four states to compare their prison construction programs with California's construction program.

Although volumes of data on inmates traditionally have been gathered and analyzed, much of our analysis relied on data that had to be collected from individual institutions or other states, or on data developed from extracts of larger CDC data sets. Some of the data we used to conduct our analysis are displayed in this report. Although many tables and graphs were omitted for the sake of brevity, they are available upon request.

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EXECUTIVE SUMMARY

Introduction

With the rapid increase in the costs of incarcerating persons in the California State Prison system, and the concern by the Administration and within the Legislature that these costs must be kept to a minimum, the Performance Review Unit of the Department of Finance was assigned the task of examining the programs and expenditures of the California Department of Corrections (CDC) to determine if the costs were excessive, and if so, what could be done to reduce them. Because the concerns of legislative staff, Department of Finance budget staff and management and others focused on health care, overtime, classification and construction (financing, design and management), those were the areas chosen for our review.

Inmate Health Care

During the past ten years, pressures from federal and state courts, the State Legislature and from within CDC have produced major changes in the delivery of health care services to California's inmate population. In 1992, the CDC established its Health Care Services Division to manage, plan and develop policies for the standardization of medically necessary health care services. Beginning April 1, 1995, CDC implemented its "Medical Standards of Care"; effective January 1, 1996, regulations became operative to govern the delivery of health care services in licensed "Correctional Treatment Centers (CTCs)"; and CDC is now in the process of converting many of its infirmary medical facilities to CTCs.

Inmate health care costs represent about 13 percent of CDC's total projected 1996-97 budget. Because of the significant costs in this area being incurred by the State, we reviewed CDC's inmate health care program to determine whether efficiencies and economies are possible. Our inquiries and review indicated several areas where CDC can make changes that we believe will make it more effective, allowing it to produce the quality health care required at a significant savings to the General Fund. The more significant changes we are recommending are summarized below.

Our recommendations in the area of institution pharmacies and their staffing include:

- initiating activities during 1996-97 to begin centralizing CDC's pharmacy operations

- improving management and oversight over purchase of non-formulary and non-contract drugs

- having CDC report the value and volume of contract and non-contract drug purchases during the development of the 1997-98 Governor's Budget for analysis of potential savings in drug purchasing during 1997-98

In the area of utilization management, we are recommending that CDC adopt a more comprehensive utilization management process than it currently plans to establish. CDC's plan should cover all medical services (inpatient, outpatient, prison hospital beds and contract medical services including those for mental health) and be implemented statewide.

Two areas that we believe should be reexamined are privatization of health care and CDC's staffing of Correctional Treatment Centers. While we support CDC's effort to test the viability of privitizing inmate health care, we recommend that CDC's plan be implemented as a multi-prison study over three to five years in order to have the widest possible experience with diverse populations, needs, facilities and services. We also recommend that during the 1997-98 budget process CDC submit a workload justification for selected CTC positions and a plan for licensing the CTCs.

Another area of potentially significant savings to the State is providing acute hospital care for female inmates in one of the four CDC acute care hospitals now set aside for males, rather than have them go to community hospitals.

Management of Overtime

Despite efforts to contain overtime, correctional officers worked more than 2 million hours of overtime during 1995. During the 1994-95 Fiscal Year, CDC incurred overtime expenses of almost $144 million and is likely to incur similar expenses during 1995-96. Chapter 2 of the report presents the Department of Finance's analysis of CDC's management of overtime usage and suggests steps that CDC can take to significantly reduce overtime expenditures. These steps include:

- maximizing the use of permanent intermittent employees (PIEs) to fill vacant and relief post positions

- increasing the number of classes offered by the Academy and filling all classes to ensure a full “pipeline” of correctional officers and PIEs to meet the long term needs of the institutions

If implemented, these recommendations could result in annual General Fund savings of between $10 and $15 million beginning in 1997-98.

Inmate Classification

CDC has never validated its system for assigning inmates to specific institutions. This system, known as CDC's Classification System, was last evaluated by the Department in 1986. Based on our research and discussions with experts in this area, we believe that CDC's classification model, which is used to score inmates on their escape potential and their likely institutional behavioral patterns, may be placing many inmates into higher security and higher custody settings than is warranted.

In Chapter 3 of the report, we recommend changes to the way CDC classifies inmates and houses them. These recommendations include:

- CDC's validating its classification model by April 1997
- CDC's giving some consideration to moving older Level III inmates from cells to dormitories, even before the model has been validated
- reducing the number of unnecessary classification hearings
- making other changes at CDC Headquarters and at institutions to improve the efficiency of the inmate classification process, including more training and a restructuring of classification staff roles

If these recommendations are adopted, besides making the institutional classification process more efficient, thereby allowing counselors and custody staff to make better use of their time, we estimate they could significantly reduce the construction and operating costs of the six prisons currently planned for construction.

Prison Finance

The State has several options for satisfying its need for prison beds. These include the sale of general obligation bonds, lease revenue bonds or certificates of participation, entering into lease agreements or lease-purchase agreements with private firms for bed space, and contracting out. Chapter 4 presents these options and discusses the advantages and disadvantages of each. The least costly method of financing the construction of prisons is the sale of general obligation bonds, but lease-revenue bonds can be sold more rapidly, thereby reducing costs attributable to inflation. We also note that certificates of participation can be sold for only a slight interest rate premium over the rate required on lease-revenue bonds, making them a viable option for financing prison construction.

We also examined the experiences of other states that are leasing cell space either from private entities or other states. While CDC currently leases more than 5,000

beds from counties and private prison operators in California, it appears that leasing prison beds from other states and leasing additional beds from private prison operators merit consideration by CDC.

Prison Construction Costs

Chapter 5 of this report compares the costs of building new prisons in California with several other states (Georgia, Florida, Texas and Arizona) and with the Federal Bureau of Prisons' correctional complex in Florence, Colorado. There are some factors in California, outside of the control of CDC, which operate to keep some aspects of the costs higher than in other locales, such as seismic requirements and the higher sales tax. After adjusting for differences among the states for those factors and for other factors that could be quantified during our study, we found that differences in costs between California's prisons and those of other states are much smaller than they first appear. However, there clearly are factors that are within CDC's control, such as the emphasis on security, the type of facilities being built to house female inmates, the amount of support space, the type and quantity of program offerings, and the construction of gymnasiums, that should be explored for potential cost reduction.

The recommendations in this chapter focus on changes that can be implemented by using a somewhat different approach to the philosophy of penology: building lower-cost prisons for female inmates, converting gymnasiums to housing units during construction and decreasing the amount of space for programs by sharing facilities among program uses.

Management of the Prison Construction Process

The construction management process used to build prisons is complex, with a multitude of players, many of them from different private sector organizations. The interactions and coordination demanded by this process are not always perfect, and some errors are almost inevitable. The concerns raised in Chapter 6 are with those gaps and failures that cause excessive costs. The major areas that need to be addressed are:

- decreasing the number of design errors and omissions by simplifying the standard design documents, by creating a design library, and ensuring that specifications are clear and consistent with design documents

- working toward error-free design drawings and specifications

- holding architects and engineers working on CDC construction projects fully accountable for design errors and omissions and reviewing the method of calculating the State's costs associated with those errors and omissions

- improving the change order process to ensure that the State construction costs are minimized

In addition, we believe that savings of $3.5 million per construction project can be achieved by reducing to 2.5 percent the contingency allocation for all bid packages except 1, 2 and 6.

Design-Build

This relatively new approach to construction involves the hiring of one firm to both design and build the facility. This method is described in Chapter 7, where we note the advantages and disadvantages mentioned by public agencies that have tried this approach. The major savings seem to result from the faster timeline in which projects can be completed. Several construction management firms that are knowledgeable of this approach estimated it could save about four months time in building California's prisons. If these estimates are correct, this approach may save CDC almost $3 million on each project. Additional savings may be possible from the decrease in administrative and support staff that would be needed to coordinate and oversee design and construction, since one organization would be responsible for multiple roles. Savings may also result from:

- a reduction in the number of staff needed to administer paperwork associated with 11 or more bid packages

- fewer change orders

- a reduction in the number of staff needed to manage contracts and process paperwork associated with change orders

CDC has explored design-build and hopes to pursue it for one of its currently planned prison construction projects. We are recommending that the Legislature amend existing law to permit CDC to pre-qualify potential bidders so that CDC can effectively use design-build. We also are recommending that CDC undertake a design-build approach for two or three of its next eight to ten future prison construction projects.

CHAPTER 1
HEALTH CARE SERVICES

INTRODUCTION

CDC has the legal responsibility to provide medically necessary health care (medical, dental and mental health) services to the adult population incarcerated in State correctional facilities. Consequently, as the population in these facilities has grown from an average daily population (ADP) of 46,847 in 1985 to nearly 131,000 inmates in 1995, CDC's health care services program has expanded to keep pace with the health care needs of the inmates. Today, CDC provides health care services in 32 correctional facilities, employing about 3,450 health care providers and support staff.[1] The Department also contracts with community health care providers, including community hospitals, physician groups and individual care providers for specialty care and other supplemental health services beyond the scope of services provided by CDC personnel.[2] In addition, the Department is currently authorized 195 positions for administrative and support services through its Health Care Services Division (HCSD) in Sacramento.

Table 1 shows the funding level for CDC's health care services for fiscal years 1994-95, 1995-96 and 1996-97. As shown in the table, funding for inmate health care is expected to increase by 22 percent over the three year period. The inmate population also is expected to increase by 22 percent during the same period.

During the 1980s, CDC was widely criticized for its failure to properly and adequately carry out mandated inmate health care responsibilities. Prompted by concerns raised by the Legislative Analyst's Office, actions by the State Legislature, and court litigation, and by a conscientious commitment by Department staff to establish a legally defensible health care system, CDC significantly expanded its health care services program in the early 1990s.

In response to the growing concerns about inmate health care, CDC has focused its attention in two major areas: management capabilities and mental health services. To establish a sound health care delivery system and to address criticisms about the lack of adequate long-term planning and other management deficiencies, CDC elevated its health care services

[1] This number includes 943 medical technician assistants who provide both custody and health care services.
[2] Contract medical services totaled $74.3 million in 1993-94 and $69.5 million in 1994-95.

function to a division status on July 1, 1992 and, through the 1992-93 budget process, redirected staff positions from other areas of the organization to the new Health Care Services Division. From a staffing level of 32.7 filled positions in 1991-92, the Division's authorized positions increased to 195.4 for 1995-96. To address the need for mental health services, in 1994-95 CDC began implementing its Mental Health Services Delivery (MHSD) System, a comprehensive system of mental health care for the seriously mentally disordered inmate.

TABLE 1

CDC HEALTH CARE SERVICES COSTS
1994-95 1995-96 AND 1996-97
(Dollars in Thousands)

	Actual 1994-95	Estimated 1995-96	Projected 1996-97
Health Care Services Division[a]	$13,712	$14,009	$15,289
Inmate Support:			
Medical Services	$312,403	$336,132	$366,924
Dental Services	$24,185	$30,118	$32,454
Psychiatric Services	$74,868[b]	$85,390	$102,207
Total Inmate Support	$411,456	$451,640	$501,585
Average Daily Population (ADP)	121,656	131,970	148,125
Monthly cost (dollars) per ADP	$281.84	$285.19	$282.19

Source: Governor's Budgets for 1995-96 and 1996-97

[a] Distributed administration costs. Amounts are included in Inmate Support Costs.
[b] Adjusted to include the Department of Mental Health contract cost.

As reflected in Table 1, psychiatric (mental health) services costs increased by more than 36 percent in two years. While this rate of increase is not expected in future years, expenditures for mental health services are expected to continue to increase as courts maintain oversight of the program and the Department pursues its efforts to establish mental health crisis beds within Correctional Treatment Centers (CTCs)[3] and to fully implement the MHSD System.

[3] Beginning in the late 1980s, in response to its own and court concerns that CDC was providing health care in unlicensed inpatient facilities, the Department worked with the Department of Health Services to establish a new health care licensing category for "correctional treatment centers" (CTCs). With the adoption of the CTC licensing regulations in June 1994 and an effective date of January 1, 1996, CDC is now converting some infirmary beds to CTC beds at selected prisons as well as building CTC beds at new institutions. The remaining

Concerns about the rapid growth in health care expenditures prompted the California Legislature, in 1994, to adopt an Inmate Copayment Program which requires non-indigent inmates to pay the Department five dollars for certain inmate-initiated health care visits. At the same time, the Legislature made a permanent reduction of $1.7 million from CDC's budget beginning 1994-95 as an offset of the anticipated revenue the Department would generate from the Inmate Copayment Program. The following year, the Legislature imposed a $39 million unallocated reduction on the Department's 1995-96 budget which CDC absorbed, in part, by reducing health care costs by $13.4 million.[4] Further, in the 1995-96 Budget Act, the Legislature reduced the Department's budget by $8 million in anticipation of savings resulting from the California Medical Assistance Commission assisting CDC in negotiating medical service contracts.

In view of the growing health care expenditures for California's inmate population and the Legislature's concerns, the Department of Finance's Performance Review Unit decided to examine CDC's health care services activities to determine if efficiencies are possible. In the following pages, we discuss certain issues pertaining to CDC's health care operations. Based on our review of the issues, we recommend specific actions that, if implemented by the Department, would result in reduced costs for inmate health care and thereby achieve significant savings to the General Fund.

Methodology

We performed our examination of the Department's health care services activities by interviewing staff at CDC's Health Care Services Division (HCSD) Headquarters. In addition, we conducted site visits to ten institutions and interviewed medical staff, including the chief medical officer, the Health Care Cost Utilization Program analyst, the Utilization Management Review nurse, the chief pharmacist, and the Health Program Coordinator. We also interviewed other institutional medical personnel. On occasion, we also spoke with an institution's warden and/or chief deputy warden. When appropriate, we contacted other State agencies, such as the Department of Health Services, the Department of General Services and the Board of Pharmacy to obtain licensing and program information. We also spoke informally with representatives from several HMOs operating within the State of California to determine HMO interest in providing managed health care to CDC inmates.

In addition, we traveled to Texas and spoke to staff of the Texas Department of Criminal Justice and the Texas Corrections Managed Health Care Advisory Committee to learn about the state's inmate managed health care program which includes a centralized utilization management function and a centralized pharmacy program. We also attended the American

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infirmary beds at other prisons are now classified as outpatient housing beds. CTC beds are licensed to provide subacute health care services.

[4] This includes reductions of $12 million for contract medical services and $1.4 million for medical overtime.

Institute of Architects' Conference on "Accommodating Special Needs: Design Challenges in the Correctional Environment" in Albuquerque, New Mexico. Phone conversations were held with correctional representatives in other states, such as Ohio, Florida, and New Jersey, as well as representatives of private firms involved in providing correctional services.

Our findings and recommendations are not based on any single contact. Rather, they are based on the totality of our discussions and our review of staffing and expenditure data on the Department's health care services activities.

COST COMPARISON OF SELECTED HEALTH CARE PROGRAMS

Table 2 displays cost information for selected health care programs: CDC's inmate health care services, California's Medi-Cal Program, State employee health care and the University of California employee health care. The information is reported on a monthly basis per individual covered under each program and includes total costs of health care services from all fund sources, such as State and Federal funds, and employee contributions. Based on actual data for 1995-96, the table shows that total monthly inmate cost is 12.6 percent higher than the monthly cost for a Medi-Cal beneficiary, 70 percent higher than State employee health care, and 77 percent higher than UC employee health care. The reader is cautioned, however, that the populations served by the various programs are distinct and each may have characteristics that are not shared by the other populations listed in the table. In addition, while the table shows that CDC's cost increased slightly over the three year period, the cost is expected to decline between 1995-96 and 1996-97. The Department attributes this reduction to implementation of health management efficiencies, particularly in the area of contract medical expenditures.

PHARMACY PROGRAM

Included in its health care services to the inmate population, CDC provides drugs and medication to inmates when ordered by a licensed health care provider. CDC's pharmacy program is managed by a supervising pharmacist in HCSD but pharmacists at the institution level are responsible for filling and approving the prescriptions. In some institutions, pharmacist assistants help fill the prescriptions which are then reviewed and approved by a licensed pharmacist. In 1995-96, the Department was authorized 94 pharmacists and 35.5 pharmacist assistants positions for institution operations. Staff filled about 1.9 million prescriptions in 1993-94.

TABLE 2

COMPARISON OF MONTHLY HEALTH CARE COSTS FOR SELECTED PROGRAMS 1994-95, 1995-96 AND 1996-97

Program	1994-95	1995-96	1996-97
CDC's Total Cost per Inmate (ADP)	$281.84	$285.19	$282.19
Medical and Dental Cost per Inmate	$230.56	$231.27	$224.69
Mental Health Cost per Inmate	$51.28	$53.92	$57.50
Medi-Cal Program Cost per Eligible[a]	$256.06	$253.17	$252.14
Medical and Dental Cost per Eligible	$243.06	$240.01	$238.94
Mental Health Cost per Eligible	$13.00	$13.16	$13.20
State Employees Cost per Eligible[b]	$187.22	$167.84	$167.93
UC Employees Cost Per Eligible[c]	$163.03	$161.05	N/A

Source: Data compiled by Department of Finance

[a] Costs for the Medi-Cal Program include total State and Federal funds for all Medi-Cal aid categories. In addition, the costs include funds for State operations, the Disproportionate Share Hospital Program and mental health programs for Medi-Cal beneficiaries but exclude county administration costs.

[b] Costs for State employee health care include the State's and employee contributions and State administration charges.

[c] The UC employee health care costs are reported on a calendar year basis and include employee contributions but do not include distributed administrative costs which we consider insignificant.

The Department obtains its drugs through the State's wholesale drug contractor, i.e., the "Prime Vendor."[5] Acting as the primary supplier of State contracted pharmaceuticals to participating State agencies, the Prime Vendor is responsible for providing the agencies with contract and non-contract drugs within specified delivery time periods. In addition, as part of its administration of the Prime Vendor contract, the Department of General Services (DGS) contracts with individual drug manufacturers and drug distributors for specific drugs, usually at a lower rate than could be purchased directly from a manufacturer or distributor. Prices for the contracted drugs ("Contract Pharmaceuticals"[6]) are dependent on anticipated volume, dosage, strength of medication and packaging specifications required by the participating State agencies. DGS encourages participating state agencies to identify high volume drugs to be purchased through the Contract Pharmaceuticals. By contract requirement, the Prime Vendor is required to stock and have available all contract drugs for immediate distribution to the state agencies.

[5] The current Prime Vendor is the McKesson Corporation. While McKesson's current contract expires September 30, 1996, the corporation was recently selected to remain as the Prime Vendor for the next contract period.

[6] Based on information obtained from participating State agencies, DGS has issued an "invitation for bid" (IFB) for contracted drugs. DGS anticipates awarding several hundred contract pharmaceuticals by July 31, 1996.

To ease the problem of stocking numerous types of similar drugs and to establish uniform and standardized drug medications among institutions, CDC adopted a "drug formulary" policy. In addition, by establishing the formulary, CDC expected to take advantage of "volume purchasing" through DGS's Contract Pharmaceuticals and obtain the drugs at a lower cost. The Department recently issued a revised drug formulary that physicians and pharmacists are expected to follow for approved medications. Described as a "dynamic reference document," the formulary also contains a process for authorization of non-formulary medication. [7]

Table 3 shows CDC's pharmacy costs for 1993-94 and 1994-95.[8] As the data show, the Department experienced a 16 percent increase in pharmacy costs during this period, including a 19.5 percent increase in operating equipment and expenditures (OE&E), i.e., drug purchases. If the drug costs are normalized to an average daily population (ADP) basis, the annual drug cost per ADP for 1993-94 was $97.07 compared to $110.21 for 1994-95, showing a 13.5 percent increase.

TABLE 3

CDC PHARMACY COSTS
1993-94 AND 1994-95

Fiscal Year	Salaries	Contracts	OE & E Costs	Total
1993-94	$ 5,892,289	$ 639,009	$ 11,215,340	$ 17,746,638
1994-95	$ 6,528,780	$ 634,725	$ 13,407,817	$ 20,571,322

Source: CDC data

FINDINGS

1. When the State of Texas Department of Criminal Justice implemented a managed health care program for its inmates, the new system included a centralized pharmacy. With the new system and through a variety of cost cutting and other efficiency strategies, program staff say pharmacy costs were reduced 17 percent in the first year. Within three years of operation, the centralized pharmacy operations achieved a thirty percent expenditure reduction over pharmacy costs prior to centralization.

[7] The Department is presently incorporating the drug formulary system into its "Department Operating Manual" (DOM).

[8] Based on the increase in pharmacy costs between 1993-94 and 1994-95, we estimate the 1996-97 costs to be $27.6 million.

2. Texas Department of Criminal Justice pharmacy program staff also indicated it realizes additional savings by joining a national "Group Purchase Order" organization. Because the organization represents pharmacy programs nationwide, the higher purchase volumes allow the organization to achieve greater price reductions from drug manufacturers and distributors. Texas staff also stated that that pharmaceoeconomic consultations, more centralized control of packaging, greater emphasis on control of "self-administration" of costly drugs and recycling unused medication can further reduce inmate pharmacy costs.

3. Current State law requires that a licensed pharmacist be present whenever a pharmacy is open. As a result, because each institution has its own pharmacy, CDC is required to staff each pharmacy with licensed pharmacists who then fill, as well as approve, the prescription orders. To allow for work schedules, vacations and other time off, CDC must staff each institution with licensed pharmacists. Because it employs a centralized pharmacy, Texas is able to use fewer pharmacists and to use a more economical classification, Pharmacist Assistant, to fill prescriptions. A pharmacist's salary is about 80 percent greater than the salary of a pharmacist assistant. Currently, CDC employs three pharmacists to one pharmacist assistant, whereas the ratio in the Texas program is one pharmacist to three pharmacist assistants.

   If CDC were to implement a centralized pharmacy, enabling it to change its staffing pattern to one pharmacist per three pharmacist assistants, it could reduce its staffing costs by approximately $3.0 million, or by nearly 43 percent. However, to move towards centralization and achieve these savings, CDC must first secure space to house a central pharmacy and may need to deal with staff transfers or layoffs. Either of these may take several months to accomplish.

4. Based on data received from the McKesson Corporation on the CDC institution drug purchases during the 17 month period of October 1994 through February 1996, about 42 percent of the purchases were non-contract drugs, indicating that CDC may not be fully realizing the benefits of the Contract Pharmaceuticals. During our conversations with CDC pharmacists, we were informed that many CDC physicians are prescribing non-formulary drugs.[9] We also noticed that, in some instances, physicians, chief medical officers and pharmacists are not following the department's authorization process for the use of non-formulary medication, which requires a physician to submit a completed 'non-formulary request form' to the chief medical officer, or designated appointee, for prior approval. We learned that the process is ignored, particularly when staff consider the approval to be automatic. In addition, while institutions are expected to notify Headquarters about the purchase of non-formulary drugs, the Department is not tracking the volume or dollar value of non-formulary prescriptions. Moreover, even though

[9] Some CDC pharmacists attribute the purchase of non-formulary drugs to the Department's out-of-date formulary which was published in 1991.

Headquarters staff say a new formulary has been released, the chief pharmacist at some institutions have not received the revision.

5. The contract manager for DGS's Prime Vendor and Contract Pharmaceuticals contracts stated that most CDC institutions did not respond to a recent survey to identify high volume drugs. As a result, the current "invitation for bid" process for new Contract Pharmaceuticals may not include all of CDC's high volume drugs or its formulary drugs.

6. According to staff from the Department of Health Services' Medi-Cal Drug Discount Unit, the Medi-Cal Program has about 600 drugs listed on its drug formulary (discount) list and each is provided under contract by a drug manufacturer or distributor.[10] In 1994-95, formulary drug purchases represented more than 98 percent of all Medi-Cal drug prescriptions and 90 percent of the dollar value. The average cost of a formulary prescription was $22.18, whereas the average cost of a non-formulary prescription was $88.79 or four times the average cost a formulary prescription.

   Although we are uncertain that CDC, through the State's Prime Vendor Program, can achieve the level of savings achieved by the Medi-Cal program, we believe that considerable savings are possible if CDC simply enforces its existing drug formulary policy, updates its formulary, and works with DGS to place its high-volume drugs under contract with the Prime Vendor. If CDC can achieve the 20 percent savings other states believe is possible from closely monitoring non-formulary drug usage and obtaining volume discounts for formulary drugs, it would be able to reduce its expenditures for drugs by $1.5 million to $2 million.

RECOMMENDATIONS

In our judgment, CDC's current pharmacy program is not as cost effective as it should be. We believe CDC should centralize its pharmacy operations, on a regional or statewide basis, enabling the Department to make more efficient use of pharmacist assistants while reducing the number of licensed pharmacists. In addition, a centralized program would allow for better control over authorization of non-formulary drugs. Moreover, we believe CDC can reduce General Fund costs even more by employing techniques similar to those used by Texas staff, e.g., pharmacoeconomic consultations, centralizing control of packaging, placing greater controls on self-administered drugs and recycling unused medication.

However, we recognize that some changes, such as centralization and staffing changes, cannot be accomplished immediately. To centralize its pharmacy, CDC would need to secure or build adequate warehouse space. To replace many of its pharmacists with pharmacist assistants, CDC would be required to follow existing State personnel procedures if a change of staffing patterns resulted in surplus personnel. If the Department had to initiate layoff

[10] The Medi-Cal Program is exempted by State law from purchasing drugs through the State's Prime Vendor.

procedures for displaced staff, the process could take several months before any savings could be realized. Nevertheless, because the changes we discussed in this section have the potential to reduce CDC's 1996-97 pharmacy costs by 20 percent ($5.5 million) or more, we believe it is important for the Department to begin laying the groundwork for changes that can be implemented within three years.

1. **We recommend that CDC begin centralizing as much of its pharmacy operations as possible during 1996-97**. Where possible, CDC should hold pharmacist positions vacant and transfer others to nearby institutions, enabling the Department to centralize its operations for some institutions and to substitute pharmacist assistant positions for the more costly pharmacist positions. In addition, CDC should construct future prisons without pharmacies and begin using a centralized pharmacy to meet the pharmaceutical needs of the new prisons**.**

2. **We recommend that while the Department moves towards a centralized pharmacy, it immediately improve its management and oversight over the purchase of non-formulary and non-contract drugs.** In particular, **we recommend that CDC use the Health Care Cost Utilization Program (HCCUP) analysts to collect and report prescription cost and volume data to the Headquarters' Office.** CDC management should review this information to ensure that institution staff are conforming to Department policies and modify its drug formulary as appropriate. We believe that the information collected through this process not only would be used to control the utilization of non-formulary drugs but could be used by the Department to work with DGS to establish a new Contract Pharmaceuticals contract that included all CDC's high-volume drugs.

3. **We recommend that CDC submit a report to the Department of Finance during the development of the 1997-98 Governor's Budget describing the dollar value and quantities of CDC formulary and non-formulary drugs and the value and quantities of contract and non-contract drugs purchased through the Prime Vendor.** This information, which was not available during our review, is needed to evaluate CDC's performance in controlling the cost of non-formulary drug usage and to determine whether savings in CDC's budget are possible for 1997-98.

FEMALE INMATE MEDICAL CARE

CDC houses its female inmate population at five prisons: the Central California Women's Facility (CCWF) at Chowchilla, the California Institution for Women (CIW) in Frontera, the Northern California Women's Facility (NCWF) in Stockton, the California Rehabilitation Center (CRC) in Norco and the Valley State Prison for Women (VSPW) in Chowchilla. Each institution provides primary health care onsite at medical clinics. In addition, CCWF is licensed as a skilled nursing facility (SNF) and can provide subacute medical care. With the

exception of CRC, each facility has medical beds where inmates can be housed for overnight medical observation. If inmates at CRC require observation beyond the hours of the second shift, they are transferred to CIW or a community hospital.

Under current practice, if a female inmate requires acute medical care, she is transferred to a community hospital where health care is provided by community physicians. Contract medical services in 1993-94 for three institutions (CCWF, CIW and NCWF) totaled $10.3 million. In 1994-95, contract medical costs for the three institutions were $7.8 million.[11]

FINDINGS

1. Unlike the male inmate population which can be transferred to one of four CDC acute care hospitals in lieu of receiving health care at a community hospital, female inmates must be transferred to a community hospital for all acute care services. At the same time that female inmates are receiving medical services in community settings, we note that CDC's hospital utilization data show that the acute care beds at the four prison hospitals are not being utilized to their capacity. Moreover, we learned that although the Corcoran Prison hospital was built and licensed as a 75-bed acute care medical facility, only one wing, or 25 beds, has been used by CDC since the hospital was opened in June 1993.[12]

2. We found no statutory or regulatory provision that would prevent the transfer of female inmates to a male institution for acute medical care services at a CDC's licensed hospital. However, while some CDC staff agree with the concept and thought the concept "doable," others expressed concerns that bringing female inmates into close contact with male inmates even for medical reasons would create a custody problem. Still other staff cited transportation and custody costs as an impediment to the concept. These criticisms are without merit. We found that in community hospitals, especially those with a 'locked custody unit', e.g., Riverside General Hospital and Doctors' Hospital of Manteca, male and female inmates are routinely housed in adjacent hospital rooms. In addition, if a female inmate is transferred to a community facility, the Department already incurs transportation and custody costs. In our opinion, these costs, in particular the custody costs, which constitute the majority of the costs, would be lower if the female inmate is transferred to a CDC hospital. At the same time, CDC would avoid costly contract medical services.

[11] Contract medical costs for female inmates at CRC have not been separated from costs for male inmates who are also housed at CRC. VSPW did not open until late 1995.

[12] The Department is currently in the process of opening 24 of the unused beds as subacute medical beds and 16 of the unused beds as mental health crisis beds.

RECOMMENDATIONS

1. **We recommend that CDC take necessary action to provide medically necessary specialty and acute medical care for female inmates at male institutions where acute care hospitals exist. In particular, CDC should provide specialty and acute medical care for female inmates housed at CCWF and VSPW at the Corcoran prison hospital.**

   As noted above, CDC currently is spending an estimated $10 million for contract medical services at women's institutions. By adopting this recommendation, we believe CDC can reasonably expect to reduce its annual contract medical expenditures for women's institutions by at least ten percent, or $1.0 million.[13]

2. **We recommend that CDC reconsider its plan to open the 24 beds at Corcoran at the subacute level and, instead, use the beds for acute care.** Because the Department is planning to license the health services facility at Pleasant Valley State Prison (PVSP) as a CTC and because the prison is within one hour driving time from Corcoran State Prison, the PVSP facility could be used as a "step-down" subacute facility for the hospital. The additional 24 acute care beds at Corcoran could then be used for acute care and specialty services to female inmates.

   We recognize that if CDC were to adopt this recommendation, staffing and other operational adjustments may be necessary for the hospital. Nevertheless, we believe that if the beds are used for acute health care purposes for male as well as female inmates, the higher operating costs will be more than offset by reduced contract medical costs.

HEALTH CARE COST REIMBURSEMENT

Under current CDC practices, the full cost of health care services provided to the inmate population is paid by the State's General Fund. We discussed the issue of reimbursement of health care costs by third-party issuers with CDC's Legal Office and other Department staff, and with representatives of HMOs operating in California. In addition, we contacted the Department of Health Services to determine whether inmates who received Medi-Cal benefits prior to incarceration remain eligible for health care services under the Medi-Cal Program during incarceration.

[13] Information from the Department suggests that as much as 24 percent of total female inpatient days could be directed to a CDC hospital, and that annual savings of $1.5 million may be possible.

FINDINGS

1. Federal regulations state that once an individual is incarcerated, the person is not eligible for Medicaid (Medi-Cal) benefits until the person is freed from incarceration.[14] However, we also learned that few, if any, private health insurance policies contain a provision that automatically disenrolls a beneficiary from coverage solely because of incarceration. Instead, enrollment may be dependent on employment and, once incarcerated, an inmate's employment ceases. Nevertheless, if an inmate is covered by an insurance policy carried by a spouse or some other person prior to incarceration, in all likelihood, the coverage will continue unless the policyholder (e.g., the spouse) drops the coverage or fails to make the premium payment.

2. We found that CDC has not implemented any activity to identify and determine whether these costs can be reimbursed, totally or in part, by some other party. However, we learned that the Sacramento County's Correctional Health Services Division within the Sheriff's Office has implemented a program to identify and recover health costs from insurance carriers. Staff stated that its program, as a whole, achieves an annual cost avoidance of about $1.5 million for health care services costs. However, staff said this amount includes services provided to individuals prior to their 'booking'[15] which are eligible Medi-Cal costs and estimate that one to three percent of 'booked' inmates requiring out-of-jail health care have insurance coverage. Nevertheless, while staff are not able to identify avoided costs for 'booked' inmates, they believe minimal effort is required to identify inmates who have insurance coverage, to verify coverage with the insurance carrier and to inform the health care provider of the coverage. In their judgment, the cost of this effort is more than offset by the avoided costs.

3. Based on CDC's 1994-95 contract medical service cost of nearly $70 million, if even one percent of the inmates have medical insurance, General Fund savings of $0.7 million per year may be achieved.

RECOMMENDATIONS

1. **We recommend that CDC examine the costs and benefits of identifying inmates with insurance coverage and obtaining reimbursement for health care costs, especially contract medical costs incurred by an insured inmate while incarcerated in a CDC institution. We recommend that CDC adopt procedures for recovering these reimbursements if its analysis indicates there are net savings from doing so.**

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[14] A person is considered 'incarcerated' once the individual has been 'booked' by the law enforcement agency.

[15] Although a law enforcement officer makes a field arrest of an individual, the individual is not 'booked' into a county jail until the officer has completed the proper paper work at the jail. Sacramento County is one of many counties that has adopted a 'bodiless' booking policy whereby an individual does not have to be physically present at a jail to be 'booked.' In situations such as extended medical care at a community hospital, an individual can be 'booked' into a jail even though the individual remains in the hospital.

Even though we do not know how many inmates may be covered by a health insurance policy, there is a possibility that some inmates are covered. We believe the potential savings justifies an effort by CDC to determine if any of its inmates have health insurance coverage. Currently, CDC conducts extensive medical and mental health screening when an inmate enters the prison system, i.e., at the reception center. In addition, under the new Utilization Management (UM) Program, the primary care provider must obtain prior authorization for non-emergency contract medical services. We believe existing procedures for both systems can be easily modified so that a health care provider (a physician, nurse or medical technical assistant) can ask inmates to identify any insurance coverage. If an inmate is found to have insurance coverage, the UM Review Nurse could verify coverage as part of the prior authorization process.

2. **We recommend that by March 1, 1997 CDC report to the Department of Finance the number of inmates with insurance coverage and describe the steps it has taken to seek reimbursement for health care services.**

PRIVATIZING HEALTH CARE SERVICES

For the past three years, CDC has sought legislative authority to implement a pilot project to test the viability of privatizing inmate health care services but has been unable to obtain the necessary legislation. Introduced in the State Senate in February 1994, Senate Bill 1959 proposed the privatization of a comprehensive health delivery system at selected prison sites. When the bill failed, a similar measure, Senate Bill 935, was introduced in the following year. Although the second bill also failed, the Legislature, at CDC's request, added Provision 18 to Item 5240-001-001 of the 1995 Budget Act, authorizing CDC to "take steps to contract with outside providers to establish a pilot project for the provision of inmate medical services for an entire prison in the 1996-97 fiscal year." In response to this requirement, the Department has contracted with a private consulting firm to assist in developing a request for bid (RFB) proposal which, once developed, can be used to select an outside provider. CDC anticipates that the RFB will be released later this year.

FINDINGS

1. We found that several states have recently implemented or are in the process of implementing private managed health care for their inmate populations. In particular, the State of Texas implemented its managed health care program in 1994 in cooperation with two university medical schools following legislative authority approved in 1993. The State of New Jersey planned to implement its privatized health care program with a private correctional medical provider in April 1996. In Ohio, the State Department of Corrections is developing a health care system based on a privatization-managed care-civil service

partnership. In all three states, staff are convinced that outside managed health care will reduce their state's health care cost by 15 to 20 percent.

2. In California, we have found some interest by health maintenance organizations (HMOs) in providing managed health care for inmates. Because our discussions with the HMOs were informal, we did not obtain specific cost savings estimates from the firms. The HMOs stated that the savings would depend on the service areas and the current billing rates with contract medical providers but agreed that a reasonable estimate of savings is at least 5 percent and perhaps as much as 20 percent.

3. CDC is planning to implement a one-prison pilot project to privatize its health care services at Corcoran II when that institution opens. When the institution is activated in October 1997, CDC expects to provide all medical services through a private provider.

   While we agree with the concept of a pilot project as required by the Budget language, we believe a one-year, one-prison pilot project will not produce meaningful results. Moreover, we question whether the results of the project could be expected to be reproduced on a larger scale. In our opinion, a one-year pilot project does not allow for sufficient implementation time to work out any "bugs" and yet allow adequate time to produce measurable results. In addition, a one-prison pilot project would not allow the Department and the provider to effectively and efficiently utilize existing institutional bed space since no one prison has the full range of health care beds ranging from outpatient housing to subacute care to acute care beds. We also question whether a one-prison project would address the full range of health care needs that are experienced in other prisons or systemwide.

   At the same time, we recognize that implementation of a multi-prison pilot project will take time, especially if the project involves institutions with existing health care staff. Unless the private health provider selected by CDC were to hire CDC's existing health services staff, CDC would be required to transfer the staff or terminate their employment, either of which could be very time-consuming. By selecting Corcoran II and having a private health provider contract in place at the time of activation, CDC will avoid the issue of layoffs or transfers of existing medical staff. According to staff from other states, this issue was one of the most complex matters that the states had to resolve. Significantly, those states faced the issue and resolved it. We also recognize that with a larger pilot project than the one planned, CDC would need sufficient time to select a private provider and to develop a contract that ensures delivery of health care services consistent with the department’s approved Medical Standards of Care.

RECOMMENDATIONS

We believe it is possible for the Department of Corrections to operate an efficient managed health care program with civil service staff, provided the Department is committed to managed health care and is willing to devote the necessary resources to make the program work. However, the limitations may be the ability of the Department to re-educate and convince existing staff of the merits of managed care, development of policies, procedures and necessary oversight committees, and the time frame to implement an effective managed care program. In our opinion, this re-education process will take time and will not produce the immediate results that can be realized by contracting with a private managed health care provider. For this reason, we agree with the direction proposed by the 1995-96 Budget Act Language.

However, to conduct a meaningful test of privatized inmate health care, we believe the pilot project must be of sufficient breadth and duration to test the viability of privatizing health care for the entire inmate population. The pilot project must produce measurable and meaningful results which policymakers could use to decide whether to expand or discontinue privatized managed health care services. Therefore, **we recommend that CDC expand the one-prison, one-year pilot project to a three to five year pilot project involving four to five prisons, one of which includes a prison hospital.** We suggest that the five prisons located in Fresno, Kern and Kings Counties be considered for such a pilot project. **We also recommend that CDC begin implementing this multi-prison pilot project no later than July 1, 1997 and that it work with an outside state agency to develop an evaluation model prior to implementation of the project.** Based on data provided by other states that have begun using private health care providers for inmate care, we believe a pilot project of this type would result in annual savings to the General Fund of at least 15 percent, or $12.0 million.

Although we believe the issue of displaced staff through layoffs and transfers should be faced head-on by CDC, we recognize that it may take some time to resolve. **If CDC is unable to resolve this issue in a relatively short period of time, we recommend that, as an alternative, the Administration and the Legislature consider a pilot project involving two or more planned prisons and at least one existing institution.** CDC is hoping to construct six new prisons within the next three to five years, three of which are planned for Kern County. Under this alternative and recognizing the pilot project would be delayed two to three years, a pilot project could be planned involving at least two of the new prisons in Kern County along with two existing prisons in Kern and/or Kings Counties. Health care staff at the existing prisons could be transferred to another new or existing prison health facility. We believe prisons within a 100-mile radius should be selected for a multi-prison pilot project so that CDC and the private health provider can move inmates based on health care needs to effectively and efficiently use all health care beds, including outpatient housing, CTC and acute care beds.

UTILIZATION MANAGEMENT

Utilization management is the process of conducting prospective, concurrent and retrospective reviews to ensure that medically necessary and quality health care services are provided in the most cost efficient and effective manner. With the authorization, through a 1995-96 BCP, of 19 limited-term nurse positions to conduct the reviews the Department implemented its utilization management (UM) plan in April 1996. The department plans to place a UM Review Nurse at all institutions whose 1993-94 contract medical service cost exceeded $1.5 million.[16] In addition, the department plans to cover institutions with lower contract medical service costs by having one UM Review Nurse work two prisons. The department anticipates that this level of staffing will produce sufficient savings to offset the cost of the 19 UM Review Nurse positions.

Along with its Medical Standards of Care which define CDC-approved scope of medical services, the Department recently adopted its UM Plan manual. Now that UM nurses have been hired by the institutions, the Department is preparing to establish Medical Authorization Review (MAR) Committees at a service area level,[17] which will function as the third level of review of inpatient and select outpatient services not approved at the first (the UM nurse) and the second (a physician advisor) levels of review.

FINDINGS

1. Utilization management is a major component of any managed care program. More importantly, we believe an effective UM activity is essential to CDC's operations. When the Department of Finance conducted its review and assessment of medical bed need for CDC in 1988-89,[18] we were critical of CDC's failure to provide adequate oversight and monitoring of health care services that were provided by contract medical providers as well as the utilization of its in-house medical beds. We continue to have this concern today as the Department now spends nearly $70 million a year for contracted medical services and its in-house medical beds are not fully utilized for medically necessary services.

2. CDC staff commented that it will take several months, maybe more than a year, before the UM program is fully operational because the Department must establish the MAR committees and educate and convince medical staff of the benefits of the UM function and

[16] Institutions with a licensed acute care hospital (CMC, CIM, CMF and Corcoran) will use existing staff to perform the UM function.

[17] CDC established the medical service areas as geographic regions which include at least one CTC and four or more other prisons to enable the Department to more effectively and efficiently utilize the limited CTC subacute beds located in select prisons.

[18] Department of Finance, A Review And Assessment of the Medical Bed Need for the California Department of Corrections Inmate Population, July 1989, Report No. D89-2.

the Department's scope of medical services. According to the medical staff, the State will begin realizing savings immediately, but the full impact is several months away.

The anticipated time frame to train and educate staff is particularly troublesome to us in view of the fact that CDC has recognized since the late 1980's that utilization management is likely to produce significant savings. Moreover, unless strong management oversight remains constant throughout the implementation period, the process may extend beyond the Department's time frame. Long-time CDC medical staff who have not worked in a managed care environment may continue to resist change, and chief medical officers or physician advisors may be unwilling to disagree with their professional colleagues.

3. CDC reported that, through its initial efforts to control utilization and improved contract terms, the level of contract expenditures is expected to decline by 6.5 percent between 1992-93 and 1995-96. Similarly, community hospital days are expected to decrease by 31 percent and the average length of stay in a community hospital is expected to decrease by 17 percent. Although we found that several factors contributed to these reductions, including the opening of the Corcoran Prison Hospital and the advice of the California Medical Assistance Commission regarding contract negotiations with community hospitals, we believe that significant savings are possible through utilization management. Because CDC is just now implementing its UM Program at most institutions, it is not able to provide us with any information regarding program savings.

4. As noted earlier in this chapter, the Legislature reduced CDC's support appropriation by $8 million during 1995-96 in anticipation of CDC's obtaining the assistance of the California Medical Assistance Commission (CMAC) in negotiating health services contracts. While CDC has not provided us with data to show the reduction in contract medical rates, from our review of CDC documents and from discussions with CMAC staff, we know that CDC has been successful in negotiating favorable contract rates with some community hospitals. According to correspondence between CMAC and CDC, CMAC staff noted that during their assistance to CDC they found that CDC staff had succeeded in reducing medical costs through recent contracting efforts conducted in 1994-95. Further, CMAC staff believed that, based on CDC's experience in the past two years, CDC staff were capable of negotiating further contract rate reductions without CMAC's assistance. Because of this, CMAC management felt that it was not necessary for CMAC to be involved in CDC's contract negotiations for the intent of the Legislature's 1995-96 budget action to be met.

   We concur with CMAC's assessment. Moreover, as a result of CDC's success in reducing contract rates, we believe the primary means by which CDC can achieve further reductions in contract medical costs is a comprehensive UM Program, in which each institution is assigned at least one position whose responsibility is utilization review. If the experiences of other states and the Medi-Cal Program are representative, and we have

no reason to believe that they are not, CDC should be able to achieve savings exceeding the level it projected when it requested the 19 UM Review Nurses for 1995-96.[19] With reliable data, we anticipate that a strongly enforced and managed UM Program will demonstrate a higher level of savings within the first year of operation.

5. Two of the states we contacted believed that UM was most effective when the UM function was centralized within the department. We see merit in centralizing the UM function on a regional or statewide basis because it would reduce the influence of the institutional staff to automatically concur with health care services recommended by the primary care provider. Also, a centralized process would ensure greater uniformity and standardization of medical services and allow CDC institution medical staff more time to perform direct medical services without performing time consuming committee functions. The State of Texas has centralized its UM function within its managed health care program and staff believe the centralized process is an effective cost and quality control strategy. Nevertheless, we agree with CDC staff that a centralized process has two limitations. First, primary care providers may not be forced to be responsible for the decisions to provide or deny services. Instead, the providers might allow the decision making process, e.g., the MAR Committee, to bear the responsibility for denying an inmate service, thus minimizing potential legal action directly on the primary care provider. In addition, a centralized process most likely would require additional staff since UM staff will still be necessary at the institution level and additional staff will be necessary to conduct the centralized review. However, we anticipate this additional cost would be offset by more immediate implementation of the program.

RECOMMENDATIONS

We support the Department's efforts to establish the UM function. However, we believe the potential for savings through an effective UM function is greater than the level CDC anticipated in its 1995-96 BCP. In our opinion, the UM function should apply to occupied outpatient housing (infirmary) beds as well as CDC's licensed prison beds and contract medical services, both medical and mental health services. Consequently, UM should be practiced at every institution as well as for contracted outpatient, inpatient and specialty services. In addition, because the Department has recognized the need for an effective UM program as early as the late 1980s, further delays of full and immediate implementation continue to impose an unnecessary burden on the General Fund.

1. In our opinion, the current UM function must be enhanced to achieve more timely and cost effective results. To ensure an effective UM program, **we recommend that CDC**

[19] In the BCP, CDC projected the savings to be $1 million, the projected cost of the 19 positions. This represents a seven percent savings in total contract medical services. Based on data received from other states, an effective UM function can achieve an annual savings of 10 to 15 percent during first three years of implementation.

dedicate sufficient resources to complete the UM training and policy development activities by September 1, 1996.

2. To allow the Administration and the Legislature to make informed decisions about expanding or modifying CDC's UM Program in 1997-98, **we recommend that by March 1, 1997 CDC report to the Department of Finance the reduction in contract medical days and the reduction in the average length of stay at community hospitals that are attributable to the UM Program. Further, we recommend that in the report CDC assess its current UM Program and describe what changes, if any, it plans for the Program.**

REDIRECTION OF STAFF

When CDC proposed creating the Health Care Services Division, it intended to staff the Division with 198 positions by redirecting existing staff from other divisions and adding new positions over a three year expansion period. Organizationally divided into the three areas of operations, program development, and program support and evaluation, most of the 195.4 authorized positions in 1995-96 are located in the Division's Sacramento Headquarters. However, some Headquarters' staff, such as the Health Care Cost Utilization Program analysts and some public health nurses provide direct field services at the institution level.

In the BCP proposing the HCSD, CDC did not offer workload data as a basis for the requested positions. Instead, CDC requested the number of positions it felt were required to complete the necessary tasks and workload. As part of the justifications for the positions, the Department cited the need to develop systemwide policies and procedures, to define qualitatively and quantitatively the levels of inmate health care, and to develop other management tools.

FINDINGS AND RECOMMENDATIONS

As we talked to both Headquarters and field staff, we were informed that additional administrative and management support staff are critically needed in the institutions' health services facilities. In the absence of workload information, we cannot confirm this need. However, consistent with long-standing Administration policy regarding funding new or expanded activities, the Department should first look to implementing internal efficiencies to fund critical needs without relying on General Fund augmentations. One area of CDC's operation that should be given serious consideration for reduction to fund any needed for positions at the institutions is CDC's Health Services Division Headquarters' positions.

The Health Care Services Division has now been in existence in excess of three years, and 76 positions continue to be assigned to the program development function.[20] While we recognize that health care is a dynamic service program and that the need to develop health care policies and procedures will continue, in our opinion the Department should begin reducing its current level of planning and program development activities and should be making plans for redirecting some of the existing 76 Headquarters positions to staff field operations. We believe that three years is an adequate period of time for the extensive planning and policy development that was required when the Division was first created and that the highest priority for health services positions currently is at the institutions, not at CDC Headquarters.

Besides the 76 positions CDC has assigned to program development, 14 positions are assigned to regional administrators to support policy implementation and management oversight of the field operations. Each of the three administrators is assigned a medical consultant position, a nursing consultant position, a psychologist consultant and an analyst position. Also, a psychiatrist position is assigned to one regional administrator and a pharmacy services manager position is assigned to another administrator. Lacking workload data, CDC has been unable to demonstrate that these regional positions do not duplicate its Headquarters positions.

Therefore, **we recommend that CDC, the Youth and Adult Correctional Agency and the Department of Finance evaluate the continued need for the current number of planning and policy development positions in the CDC's Health Services Division, including the positions assigned to its regional offices, during the development of the 1997-98 Governor's Budget. In particular, consideration should be given to redirecting Health Care Services Division planning and policy development positions from Headquarters to institutions to perform utilization review and pharmaceutical management activities. If additional utilization review and pharmaceutical management positions are not considered necessary, we recommend that the planning and policy development positions be redirected to fill other position needs at institutions unless workload data can be presented to justify continuation of the Headquarters positions.**

CORRECTIONAL TREATMENT CENTERS

As part of its effort to establish a legally defensible inmate health care delivery system, CDC worked with the Legislature and the Department of Health Services to establish a new licensing category, correctional treatment centers (CTCs), for inpatient bed facilities in the State's prison system. Regulations for the CTCs were adopted in June 1994 and became effective January 1, 1996.

[20] The 76 positions do not include 13 Headquarters positions for the Quality Assurance/Risk Reduction Unit proposed in 1996-97.

Staffing for the first ten CTCs was authorized in two 1995-96 BCPs. The Department received approval for 110.7 medical staff positions through its "Health Care Service Delivery System" BCP and another 26.7 medical positions through the "Population" BCP. In a proposed BCP for 1996-97, the Administration is requesting an additional 40 medical CTC positions. (See Table 4.) These do not include 32.5 positions for mental health crisis beds received in 1995-96 and an additional 22 mental health crisis bed positions proposed for 1996-97. CDC plans to eventually have 15 licensed CTCs at its existing 32 institutions.[21] When all CTCs are on-line, the Department will have 173 CTC medical beds and 91 CTC mental health crisis beds. In addition, the Department will operate 81 medical and 43 mental health beds as subacute beds under other licensing provisions.[22] (See Table 5.)

FINDINGS

1. Table 5 displays CDC's latest schedule for bringing CTCs on-line and for completing the facility plant modifications to comply with CTC licensing requirements. We found that this schedule reflects changes to the original plan submitted in the BCP as to which prisons' medical facilities will be brought on-line and within what time frame. Moreover, CDC stated that extensive plant modifications are necessary at some prisons to obtain CTC licensing from the Department of Health Services (DHS). CDC anticipates that bond funds will be needed to finance these modifications. However, at the present time, no bond moneys are available and CDC must await future voter or legislative approval for additional bond authority.

2. According to DHS staff, while existing licensing procedures would allow the department to license a CTC even though all physical plant modifications are not complete, CDC would be required to have an 'action plan' approved by DHS before a license could be obtained for the CTC. DHS's approval of the plan would be dependent on the nature of the required modifications. However, we learned that CDC has not yet submitted any applications for CTC licensure to DHS. We also learned that CDC could face sanctions from DHS if CDC provides CTC level of care in its designated CTC facilities prior to securing a license.

3. For 1996-97, CDC will be authorized 15 Standards Compliance Coordinator positions. The State Developmental Centers, the State Mental Hospitals and the Veteran's Hospital use the Standards Compliance Coordinator personnel classification. According to the 1996-97 Salaries and Wage Supplement, each of the developmental centers and hospitals

[21] The 32 prisons include Salinas Valley (Soledad II) but not Corcoran II. The 15 CTCs include ten authorized in the 1995-96 BCP, three requested in a 1996-97 BCP and two planned for future development.

[22] CDC is licensed to operate acute care services at four prisons and subacute services at another prison. Under its licensing provisions, CDC is authorized to operate the beds at a lower level of service, if it desires.

TABLE 4

CTC MEDICAL STAFFING
BY CLASSIFICATION

Classification	95-96 BCP[a]	95-96 BCP (PVSP[b])	Sub-total	96-97 BCP[c]	Total Positions
CEA I	6	1	7	4	11
Standards Compliance Coord.	10	1	11	4	15
Health Program Coordinator	1	0	1	0	1
Dietitian	1.9	1	2.9	0.4	3.3
Pharmacist	3.5	1	4.5	2	6.5
Pharmacist Assistant	8.5	1	9.5	2	11.5
Medical Records Director	1.6	1	2.6	0.8	3.4
Health Records Technician II	2	1	3	1	4
Health Records Technician I	1	0	1	0	1
Medical Transcriber	7	2	9	2	11
Senior Clinical Lab Technician	0.4	0	0.4	0	0.4
Clinical Lab Technician	2	0	2	0	2
Office Technician	0	4	4	3	7
Office Assistant (general)	1	0	1	1	2
Office Assistant (typing)	0	0	0	2	2
Medical Technical Assistant	8	0	8	4	12
Registered Nurse	23.2	3.5	26.7	3.2	29.9
Emergency Services RN	25.6	3.2	28.8	8.6	37.4
Supervising RN	5	1	6	2	8
Director of Nursing	3	0	3	0	3
Janitor Supervisor II	0	1	1	0	1
Public Health Nurse	0	2	2	0	2
Clinical Psychologist	0	1	1	0	1
AGPA Cost Analysis	0	2	2	0	2
Medical Total	110.7	26.7	137.4	40.0	177.4

[a] The 1995-96 BCP included: CCWF (7.5), SAC (13.5), LAC (13.0), WSP (6.5), NKSP (16.5), CMC (1), Solano (2), HDSP (10.7), PBSP (8.7), COR (13.0), RJD (4.3), and MCSP (14) for a total of 110.7 positions.

[b] Staffing for the Pleasant Valley Prison (PVSP) was established through the 1995-96 Population BCP rather than the 1995-96 Health Care Service Delivery System BCP. Two positions (one AGPA and one Public Health Nurse) were allocated to Valley State Prison for Women.

[c] Proposed staffing for Centinela, Ironwood, Soledad II and Solano II Prisons.

Source: CDC information compiled by the Department of Finance

TABLE 5

MEDICAL AND MENTAL HEALTH CRISIS BEDS BY CTC INSTITUTION

CTC Institution	Staffing BCP	#Med. Beds	# Crisis Beds	On-line	Construction Date
Pelican Bay	1995-96	10	6	1995-96	07/1998
CSP Sacramento	1995-96	12	5	1995-96	07/1998
CSP High Desert	1995-96	20	12	1995-96	N/A
Mule Creek	1995-96	8	4	1995-96	04/1999
CSP Solano	1995-96	8	16	1996-97	04/1999
San Quentin	Future	14	10	1997-98	03/2000
Pleasant Valley	1995-96	17	0	1995-96	N/A
Soledad II	1996-97	12	10	1996-97	N/A
Wasco	1995-96	12	16	1995-96	07/1998
North Kern	1995-96	13	5	1995-96	04/1999
CSP LA County	1995-96	10	8	1995-96	07/1998
RJ Donovan	1995-96	14	6	1995-96	07/1998
CSP Ironwood	1996-97	10	5	1996-97	12/1998
CCP Centinela	1996-97	11	4	1996-97	12/1998
CIW	Future	10	10	1997-98	03/2000
Subtotal		173	91		
Other Institutions[a]					
CCWF	1995-96	20	12	1995-96	
CIM	Redirection	31	10	1994-95	
CMC	1995-96	6	5	1994-95	
CSP Corcoran	1995-96	24	16	1995-96	
Subtotal		81	43		
Total		254	134		

Source: CDC April 1996 Allocation Report and 1995-96 BCP #02 "Central Administration."

[a] These institutions currently are licensed to provide acute or subacute care. Most of the positions required for the CTC beds were provided through redirection of positions previously assigned to provide acute or subacute care.

is authorized one to three Standards Compliance Coordinator positions. The number of licensed beds at each facility varies from 600 to more than 1,000. We recognize the necessity of CDC's having an ongoing standards compliance function to obtain and maintain licensure at its CTCs. However, although we recognize there are differences in duties and responsibilities among the various departments in their use of Standards Compliance Coordinators, in the absence of CDC workload data we must question the need for a full-time position at every CTC, where the average number of medical and mental health beds is only 17.6.

4. Currently, each CDC prison is authorized a chief Pharmacist II position, one or more Pharmacist I positions and, in some prisons, one or more Pharmacist Assistant positions. Because CDC did not include workload data for an additional Pharmacist or Pharmacist Assistant position as part of a CTC staffing package, we do not know the justification for the additional position at a CTC relative to the existing positions. However, we question whether the CTCs will generate a sufficient volume of additional prescriptions to warrant an additional pharmacist or pharmacist assistant at most facilities. With few exceptions, the number of health care beds did not increase when the institution converted from an outpatient housing unit (infirmary) to a CTC. Also, while inmates could be temporarily transferred to an institution with a CTC from a non-CTC prison, the number of inmates at a CTC institution will not change with licensure as a CTC.

5. We recognize that CTC licensing regulations require 2.5 nursing hours per patient day and round-the-clock coverage by at least one registered nurse. We also recognize the need for positions for dietitian services, medical records services and standby emergency medical services. However, due to the absence of workload data, we are unable to assess the ongoing need for many other CTC positions. These administrative and support positions, include the CEA I positions, health records positions, medical transcribers and medical technical assistant positions. Many of these positions appear to be performing activities that are already performed to some extent by other staff at the proposed CTC facilities.

RECOMMENDATION

We recommend that during the 1997-98 BCP process CDC submit workload data to the Department of Finance justifying continuation of the selected CTC positions noted in Findings 3, 4 and 5. This workload data should distinguish between the duties and responsibilities of the new positions and the duties, responsibilities and workload of similar positions existing at the institution when the CTC positions were approved.

OTHER OPERATIONAL EFFICIENCY ISSUES

As we reviewed the health services activities at the Headquarters and field operations, we observed several processes that can be modified to achieve efficiencies and economies while improving management information. We present our findings and recommendations concerning these processes in this section.

Data Entry Practices

The Health Care Services Division maintains four computerized databases: the Census Data System, the Discharge Data System, the Cost Reporting (CALSTARS) System, and the Contract Invoice Monitoring System. We found that certain data elements, for example, admission and discharge dates, are common to most, if not all, of the systems. Yet, separate entry of the information was occurring for each system, often by different staff operating on independent computer systems. As a result, not only does this process increase total key entry workload but staff also have to be concerned about differences in information among the databases. Consequently, additional staff activity is required to verify data entry and ensure uniformity to minimize potential discrepancies.

We believe these practices create an inefficient use of resources. Current automation technology would allow the Department to connect (network) the computers, thereby enabling staff to share automated information. Networking common information would reduce current staff workload and improve accuracy of information.

Contract Medical Service Invoicing

The Department established the Health Care Cost Utilization Program (HCCUP) analyst series, in part, to give it the capability of ensuring accurate invoicing and payment of contract medical services. While the analysts are assigned to and work at the institution level, they are supervised by staff at the Division's Headquarters and, therefore, they are considered Headquarters' employees.

At the institution, the analysts maintain a database of contract medical services. Most analysts create an initial database record when they are informed that an inmate is scheduled for outpatient specialty health care or inpatient health service in a community setting. This practice is performed so that the analyst can reasonably project contract medical costs on a timely basis rather than delay entering cost information until a billing invoice is received from the health care provider. Once an invoice is received and after checking it for accuracy, length of stay, billing rates and provided services, the analyst will update the database record. On a monthly basis, the analyst ships a disk file of transactions to Headquarters.

We noted some inefficiencies with the current practices associated with this work activity. This is one activity that duplicates key entry of admission and discharge information that was noted above. Also, we found that most analysts must manually look up medical service procedure codes, billing rates and "relative value system" codes. In our opinion, many of the codes and rates can be incorporated into computerized tables that would automatically assign correct information into a data record by key entering only code information. These automated "look-up" tables could significantly reduce the work activity of the analysts. Much of this information, such as procedure and relative value codes, applies systemwide and would not have to be re-established at each institution.

We also learned that although the information is provided to Headquarters on a monthly basis, Headquarters currently does not consolidate the information into a single statewide table or report. As a result, systemwide information is not available on a timely basis for other sections of the Division. The contracting section, for example, uses this type of information when negotiating contracts with community medical care providers.

We believe the Department can improve the efficiency of this activity by developing "look-up" tables for the analysts at the institution level. In addition, timely systemwide information on a monthly basis would improve management oversight of contracted medical services as well as provide critical information to the contract personnel. **In addition, we suggest that the Department examine the possibility of consolidating the contract invoice monitoring system on a regional or statewide basis.** We believe consolidation of this activity could lead to greater efficiencies and timeliness of information.

Prior Authorization

Essential to an effective utilization management program and an efficient and effective contract invoice monitoring system is a workable prior authorization process. According to the Department's Utilization Management (UM) Plan, authorization for all health care services by a contract medical provider must have approval from specified CDC medical staff before the services are rendered. The exception to this policy is emergency services, for which retrospective approval is required. For non-emergency services, the primary care physician or consultant must complete a written authorization request and submit it to the UM nurse for approval. If the nurse does not approve the service, the request must be authorized or denied by a physician advisor, the chief medical officer or the Medical Authorization Review Committee.

In our review of this process and the HCCUP analyst activities, we noted that many HCCUP analysts do not seem to be aware of what services were authorized and by whom. Consequently, when reviewing a billing invoice for services, many analyst are not aware of whether a billed procedure was, in fact, authorized by the proper CDC medical authority. In addition, although an initial procedure (service) received proper prior authorization, many analysts may not be able to determine whether related or subsequent procedures and services

are covered under the original authorization. Because the HCCUP analyst series has no medical experience requirements, an analyst may not have the skill without further training to properly determine whether all invoiced procedures and services are appropriate for payment.

Because of the high cost of contract medical services, **we recommend that CDC examine its current work processes to ensure adequate written information is provided and available to the HCCUP analysts so that they can accurately determine the appropriateness of submitted invoices.**

Step-Down Beds at CTCs

When the Department of Finance conducted its review of CDC medical beds in 1987-88, we expressed concern about CDC's ability to ensure the proper utilization of medical beds. In the opinion of Department of Finance medical consultant staff who assisted in the review, CDC was housing inmates in medical beds without an associated medical reason. For example, at the three acute care hospitals, inmates were housed in acute care beds even though their medical needs did not warrant that level of housing; instead, a less costly medical housing placement would have satisfied the inmate's medical needs.

We are equally concerned about this issue today. While the Department has taken action to establish "step-down" beds in its health facilities where acute hospitals are located, a lower level of care, i.e., outpatient housing unit (OHU), formerly called infirmary care, still does not exist at those institutions and will not exist where CTC facilities are planned. In our opinion, as well as that of many correctional medical people with whom we spoke, OHU care is necessary at every prison. We believe that without such a facility, some inmates will be housed in a CTC or acute care bed for observation purposes only, to control an inmate's intake of food prior to a scheduled surgery, or because of an inmate's physical condition such as a wired jaw, or a broken arm or leg, which would pose a custody or safety factor if the inmate were returned to his mainline cell. While these are justifiable reasons for keeping an inmate in a medical bed, the inmate should be housed in the least costly setting consistent with his medical need.

We believe CDC must continue its efforts to resolve this matter. As an alternative to establishing OHU beds at CTC facilities, the Department may have to transfer inmates out of CTC institutions for housing at a prison with OHU beds. If, in fact, CDC establishes and maintains the strong utilization management program that is set forth in its UM Plan, the Department must also efficiently manage its in-house use of CTC and OHU beds.

CHAPTER 2
OVERTIME MANAGEMENT

INTRODUCTION

As the California Department of Corrections (CDC) attempts to address the problems of a burgeoning inmate population and of a growing resistance by the Legislature to provide a larger share of the public monies to accommodate prison needs, searching for greater efficiencies within the Department and streamlining activities continue to be a priority for CDC management. In this context, control of the expenses associated with use of overtime emerges again as an issue. Ten years ago, the Department of Finance and CDC were concerned about the magnitude of overtime expenditures, estimated to be between $30 and $45 million during Fiscal Year 1986-87. Eight years later, during 1994-95, CDC spent almost $141 million for overtime. Although $114 million is being proposed for 1996-97, we believe the actual amount spent in 1996-97 may exceed the $141 million spent in 1994-95. In this chapter we discuss the issues related to the management of overtime, and suggest some methods for addressing the problem.

CDC'S MANAGEMENT OF OVERTIME

Historically, the management of overtime has been handled autonomously by each institution. As long as institutions stayed within their budgeted amounts for personal services, CDC budget staff were not concerned with the individual areas of expenditures, such as overtime. This meant, for example, that when vacant positions occurred, the institutions could fill them by new hires, permanent intermittent employees (PIEs) or overtime. The management staff of the institutions we visited assured us of their commitment to minimizing overtime costs and showed us the various mechanisms they use to control overtime. Yet, despite the institutions' concerns about overtime usage, overtime expenditures have continued to increase.

More recently, CDC management has begun to pay closer attention to the institutions' use of overtime. For 1995-96, CDC reduced its budget for overtime by $10 million, allocating the decreases to the institutions in amounts ranging from $65,000 to $574,000. CDC management formed a task force in November 1995, four months into the fiscal year, to develop a departmentwide policy on use of custody overtime and reporting practices. The task force finished its work, conferred with the appropriate Labor Relations staff and in April 1996 issued a directive on overtime usage. The directive contains strong emphasis on the reduction, and even elimination, of overtime expenditures.

The directive also emphasizes the use of PIEs as the primary means of addressing excessive overtime use, and specifically requires the institutions to hire PIEs in sufficient numbers to replace 80 percent of overtime hours. The effort now is to have the institutions request the number of PIEs necessary to meet the needs of the institution. The new directive takes institution personnel on a step-by-step process by which they can accurately determine the number of PIEs needed in the immediate future.

The directive's emphasis on PIEs is appropriate, given our analysis of overtime data. In our analysis of the overtime worked by correctional officers at each institution between January 1993 and December 1995, we found that the institutions that made use of PIEs to fill vacant positions experienced a decrease in their use of overtime.

In our effort to understand how institutions were utilizing overtime, we visited 15 institutions and talked with management and assignment staff about their methods for meeting staffing needs. Staff at all the institutions we visited expressed concern about the use of overtime, and all institutions have devised systems to address the problem. Vacancies are filled by an assortment of mechanisms including holiday/relief staff (may consist of former PIEs newly hired as full time staff), utility officers (officers who have extra days/hours available when the master roster is made up for the month), PIEs and overtime. Not all vacant posts are filled on a temporary basis; some are permitted by prior agreement with the labor union to go uncovered, if security is not undermined.

Some institutional staff expressed the view that the number of PIEs could not exceed ten percent of the full time personnel. But even this was interpreted differently in different settings. Some believed this meant ten percent of total workforce; others thought ten percent of current full-time correctional officers; and still others were under the impression that the ten percent referred to authorized correctional officer positions. Ironically, the ten percent rule has never been a policy of the Institutions Division.

Because the hiring of staff has not kept pace with the increase in the number of inmates, some institution staff perceived that it did not matter if a PIE or overtime was used to fill a vacancy because overtime would still have to be used to cover the position that would have been assigned to the PIE. So there would always be a need for overtime when there were vacancies in positions that needed to be covered.

In the past, there was no significant difference in expenditures incurred through the use of a senior officer or a PIE. This changed when the union negotiations permitted the starting salary for correctional officers to be lowered so as to provide raises for experienced personnel. This change meant that use of PIEs provided a considerable and dramatic savings over paying senior staff to work overtime.

Although the institution staff responsible for assignments today are aware of these savings, there remain several institutional barriers to reducing overtime. Under CDC’s collective

bargaining agreement with the peace officers' association, overtime assignments are issued on a seniority basis. We were told repeatedly that many correctional staff have come to consider overtime a "given" and thus a "necessity" in meeting their monthly financial obligations. This has sometimes created a dilemma for the assignment staff between prudent fiscal management and continuing the tradition of overtime. In addition, some assignment staff use overtime because they are reluctant to use inexperienced staff in lieu of experienced officers to fill particular posts.

All the institutional staff we interviewed named sick leave as a main cause of overtime. Consequently, there is a concerted effort toward reducing sick leave. Most institutions have plans and procedures to manage sick leave, including taking adverse personnel actions if they find that sick leave usage has been excessive or that it follows a pattern of occurring in conjunction with regular days off. Most institution staff claim that they closely monitor the sick leave as a barometer of how their overtime usage is faring. We reviewed various forms used at the different institutions to track assigned overtime duty, to report sick leave and to compare expenditures for overtime compared to the use of PIEs.

It was obvious to us that we needed more comprehensive data from more institutions. We collected statistics for three calendar years, January 1993 through December 1995, on overtime usage, vacancies, sick leave, assignments of the graduates of the Richard A. McGee Correctional Training Center (known as the Academy) to institutions (both those hired immediately as full time staff and PIEs). These statistics came from all the institutions that could retrieve the information, and we charted the data. (See Appendix A.) We also looked at special circumstances that were taking place at specific institutions, such as the installation of the electric fences, or the problem one institution experienced when its locks were malfunctioning. The results for the individual institutions were discussed with several respondents, and they agreed that the charts accurately depicted the situation at their institutions. We also spent some time reviewing the status, operation and procedures of the Academy. These details are contained in Appendix B.

FINDINGS

Based on our analysis of institutional overtime and CDC's use of the Academy to fill the institutions' needs for correctional officers, we have the following observations and concerns.

1. CDC has had difficulty managing overtime usage at institutions. According to the Salary and Wages Supplements for 1993-94 through 1996-97, actual expenditures on overtime worked by security staff at institutions exceeded the budgeted expenditures by at least 40 percent. For example, in 1994-95, CDC budgeted $68.4 million for security staff overtime at institutions statewide, but actual overtime expenditures were $97.5 million. Funding for these additional overtime expenditures was obtained through reductions in other personal services expenditures (primarily salaries and benefits from vacant positions).

2. Overtime usage has varied positively with vacancies and negatively with the use of Academy graduates. Some institutions show a dramatic decrease in overtime with the arrival of PIEs from the Academy. For example, Avenal experienced such a decrease in mid-1994, CMF in March 1995, and San Quentin for a whole year beginning in September 1994. Most institutions experienced a fairly even distribution of sick leave over the three year period, even with periodic rises and falls. There were some exceptions, such as CSP-LA, which shows an increasing trend in its sick leave use, and CSP-Solano, which had high sick leave use at the end of 1994 but moderate use thereafter. Ironically, despite many institutions' use of sick leave as a barometer of overtime usage, sick leave does not appear to be highly correlated with overtime. This suggests that institutions are adequately staffed to address sick leave without resorting to overtime and that institution staff are doing a good job of predicting actual sick leave usage.[23]

3. As displayed in Table 6, from January to December 1995, correctional officers worked over 2 million hours of overtime, ranging from 111,000 hours in March to 230,000 hours in October. While some institutions were able to decrease their use of overtime in the second half of 1995, this was not the case for all the institutions. Overall, the institutions' correctional officers worked 877,013 hours in the first six months of 1995. However, in the July to December 1995 period, this number increased by one-third, to 1,187,846 hours. This raises a question about whether CDC Headquarters' goal of having the institutions reduce overtime expenditures by $10 million for 1995-96 will be met. (Appendix C-1 shows the overtime use by institution for the first six months of 1995-96 and compares that to usage in other six-month periods.)

[23] The budgetary formula that is used to staff institutions provides additional positions to deal with sick leave, vacation leave, and training. The formula allocates 7.5 days of sick leave per year per correctional officer. However, we found that many institution staff planned on 9 days of sick leave per correctional officer in determining their need for relief positions.

TABLE 6

OVERTIME HOURS WORKED BY CORRECTIONAL OFFICERS
1995

MONTH	OVERTIME HOURS
JAN	160,673
FEB	143,171
MAR	110,785
APRIL	162,455
MAY	134,489
JUNE	165,793
JULY	210,789
AUG	178,281
SEPT	178,819
OCT	230,143
NOV	167,986
DEC	226,245
TOTAL	2,069,629

4. Institutions usually have requested PIEs from the Academy based on their expected inmate population and the number of correctional officer positions generated by that number, taking into account how many experienced correctional officers may be transferring into or leaving the institution. Because institutions perceive that they have to be able to hire the PIEs as full-time employees within six to 18 months of their coming to the institution, institutional business office staff have to anticipate their personnel needs with a fair degree of accuracy. Consequently, some institutions have tended to be very conservative in their requests. In reality, someone could continue as a PIE indefinitely, although it is not likely that most employees would prefer that. We believe this situation has resulted in under-utilization of PIEs and may suggest a need to change the manner in which PIEs are assigned to institutions. The April directive on overtime in spelling out the process for requesting PIEs has as an implicit message that the institutions are not requesting all the PIEs they really need to address overtime issues.

5. The Academy planning committee is composed of about 20 individuals representing the Academy, Institutions Division, Personnel, Planning and Construction, Selection and Standards, Evaluation and Compliance, and others as specific factors are considered. This committee routinely modifies (both increases and decreases) the requests of institutions based on its current knowledge of the population growth, changes within the system and available personnel resources to staff the Academy. At a recent planning meeting, 15 requests were augmented (including assigning some cadets to institutions that did not

request any Academy graduates) and 8 were reduced (including not giving any cadets to some requesting institutions).

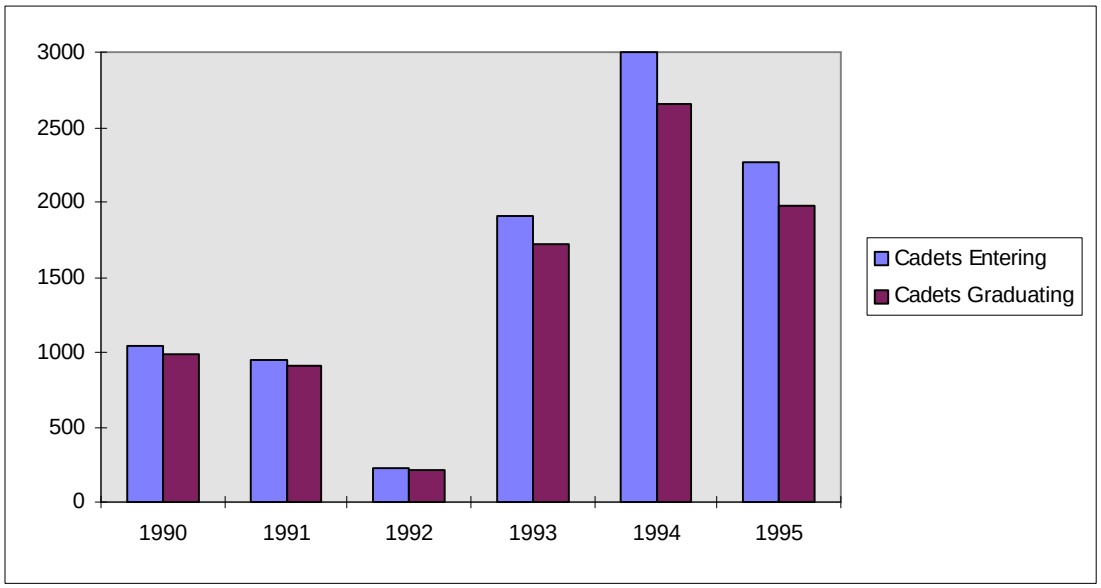
6. The Academy is the only entry point for an applicant seeking a job as a correctional officer within CDC. Even experienced police and correctional officers from other jurisdictions must complete the Academy program to qualify for a correctional officer post. The maximum capacity of the Academy is 530 cadets in each of its seven classes each year. Over the years, somewhat over 10 percent of the entering cadets have not finished the program, usually failing either in some academic area or on the firing range, or else leaving for some personal reasons. With this attrition, a maximum of about 477 cadets could graduate in each class, enabling the Academy to send a total of 3,339 new PIEs/correctional officers to the institutions in a given year. Historically, the Academy has not usually operated at full capacity.

7. The flow to the Academy is determined on the basis of quarterly inmate population predictions for the Department as a whole. In 1992, the Legislature eliminated funding for the Academy, believing that a flattening prison population and the installation of electric fences would decrease the need for correctional personnel. Although funding was restored shortly after the Budget was enacted, the Academy was actually shut down for the training of cadets for part of the year. As the charts included in Appendix A demonstrate, without a ready supply of Academy graduates, overtime usage in 1993 soared in most institutions.

8. The difficulty of accurately forecasting monthly or quarterly growth in inmate population may in large part be responsible for the peaks and valleys in the number of Academy graduates. As Figure 1 shows, the number of graduates has varied from 220 in 1992 when the Academy was closed, to 2,652 in 1994. In that period from 1990 through 1995, no graduating class approached the maximum. From our analysis of the data, it is clear that these fluctuations create problems for the institutions' management of overtime. We believe that in planning Academy classes, month-to-month, or even quarter-to-quarter, predictions of inmate growth take too small a time period into consideration. Given that the application process takes about 10 months, assuming there are no major changes in the expected rate of growth in inmates due to legislation or court processing time, the Academy should work with a longer timeline. In fact, with the current CDC directive on overtime, the Academy would do well to fill all classes, to plan for more than the current seven classes a year and keep the "pipeline" of applicants full.

FIGURE 1

CADETS GRADUATING FROM THE ACADEMY
1990-1995



9. CDC has indicated that in order for it to staff the institutions' population growth (an additional 60,000 inmates by 1998 and over 160,000 by 2005), it will need to graduate 4,088 new correctional officers per year for the foreseeable future. In its present operation, therefore, the Academy cannot meet the needs of the institutions, since its graduating capacity is only about 3,339 new PIEs or correctional officers per year.

   Expansion of the capacity of the Academy has been considered by CDC in the past, but apparently no concrete actions were taken. Increasing usable space at the present site either by renovations or with portable units might be feasible; leasing facilities that would be within commuting distance is another option. Selecting, training and hiring additional instructors could be arranged with the institutions. And the process for screening and admitting cadets to the Academy could be expanded and expedited.

   CDC will also have to build into its planning the increase in the rate of separations of correctional officers from civil service. Whereas the separation rate of correctional officers from 1988-89 through 1992-93 was about five percent, data for the recent 12-month period from March 1995 through February 1996 indicates that the separation rate of officers leaving civil service may have increased somewhat.

There is also a fair amount of movement of correctional officers from one institution to another. At some institutions, there is a waiting list of officers who want to transfer in as soon as possible. Administrative staff at some institutions feel they have little control over these personnel movements. Recently, approval authority over these transfers was given to Sacramento. We commend CDC on this change and believe it will assist CDC in providing adequate coverage throughout the system and addressing institutions' needs for experienced staff at particular places and times. We recognize that CDC cannot arbitrarily order officers to transfer or not transfer, but we also believe the Department's responsibility for the statewide safety of the public, the staff and the inmates sometimes supersedes individuals' desires to work in particular locations at a particular time.

RECOMMENDATIONS

1. To address what appears to us to be the avoidable use of overtime, **we recommend that the vacancies and absences in the institutions be filled by PIEs to the maximum extent possible, consistent with the security needs of the institutions** . As previously noted, CDC began a concerted effort to reduce overtime by reducing its 1995-96 overtime budget by $10 million and forming a task force to develop long-term solutions to the problem. We believe that CDC's April directive on overtime, instructing institutions to cover a minimum of 80 percent of their extra hours and relief needs with PIEs, will go a long way in addressing the problem.

2. To reduce overtime, institutions will need additional PIE graduates from the Academy. To accommodate this need, assuming no major changes in CDC's forecasted inmate population growth, **we recommend that the Academy be expanded to produce at least 900 additional PIEs per year**. Based on the demonstrated success of several institutions in reducing overtime through the use of PIEs, we believe that if the capability of graduating this number of additional PIEs existed today, it would be possible for institutions to reduce their overtime expenditures significantly during 1996-97. However, we recognize that changes in the rate of growth of the inmate population could significantly alter the need for Academy graduates. We do not intend that the 900 additional PIEs be independent of the rate of growth in the inmate population. Instead, the PIE target should be adjusted for any significant changes in law or policy that would affect CDC's population forecasts. Since it will take time for the Academy to gear up to meet the requests that will be coming from the institutions, **we also recommend that CDC immediately begin planning to expand the number of Academy graduates by the end of 1996-97.** We also believe the costs of expediting the process of accepting applicants for the Academy, expanding the Academy's classes and locating suitable quarters for the expanded activities can be absorbed by CDC during 1996-97. CDC should be able to achieve enough 1996-97 savings in reduced overtime to offset these costs.

With proper attention by CDC management, and assuming no major changes in CDC's population forecasts, we believe that CDC can achieve significant reductions in General Fund expenditures beginning in 1997-98. Ongoing savings to CDC, net of any increased costs of expanding the Academy, could be as much as $10 million to $15 million per year. These savings should be addressed by the Department of Finance during negotiations on the 1997-98 Governor's Budget.

3. To permit a more stable pool of PIEs to meet institutional needs, **we recommend that CDC explore ways to address institution staff's reluctance to hire PIEs because of the perceived need to hire them as permanent employees within 12 to 18 months.** PIEs should be provided an adequate number of hours of work at their assigned institutions. If that is not always possible, it may be necessary to allow PIEs to work at more than one institution within a circumscribed commuting distance (such as 25 miles). This is being done to some extent now, but the practice may need to be formalized as CDC expands its use of PIEs.

4. **We recommend that CDC focus less on month-to-month and quarterly projections of inmate growth and more on annual growth projections to fill classes at the Academy.** CDC has been unsuccessful in predicting institutions' needs for PIEs on a month-to-month or quarterly basis based on its quarterly population forecasts. We believe CDC would be more successful in meeting institutions' needs if it relied on its annual population forecast and historical turnover rates at institutions in determining how many cadets it should admit to the Academy. While it is possible that legislation may affect growth in the number of inmates, the overall objective should be to keep the "pipeline" of Academy graduates full so that institutions can obtain PIEs when they need them.

CHAPTER 3
INMATE CLASSIFICATION

INTRODUCTION

Like most other correctional agencies, CDC has a formal process for distinguishing among inmates who require close supervision because they are escape risks or are likely to engage in aggressive behavior and inmates who require less supervision. In California, this process has two components: (1) an "inmate classification system" that is administered centrally and relies upon an additive, points-based model for classifying inmates into one of four levels designed to measure the amount of institutional security required for each inmate; and (2) a custody system that is administered by each institution and monitored by CDC Headquarters that is designed to provide the degree of supervision required by the inmate.[24]

This chapter addresses the adequacy of CDC's classification and custody systems and the process CDC uses to implement these systems.

INMATE CLASSIFICATION SYSTEMS

Most inmate classification experts agree that classification systems must satisfy a number of organizational goals. Among these are avoiding unnecessary litigation, using resources in a cost-effective manner and planning future prison housing needs. However, first and foremost is the need to identify aggressive inmates who require close custody for the protection of correctional staff and other inmates. Where state departments of corrections have not used objective[25] classification systems designed to separate aggressive inmates from less aggressive ones, federal courts have intervened. Among the principal concerns of the courts are that classification systems not be capricious or discriminatory or place inmates in more restrictive custody settings than are necessary to preserve the safety of inmates and staff. Courts frequently have forced correctional agencies to change their classification systems when they found them to be based on unfounded assumptions or when the rules were not applied uniformly to all inmates.

[24] Some state correctional agencies and the Federal Bureau of Prisons use a classification system that includes a custody component. In California, these systems are separate although, to some extent, they are interrelated.

[25] An objective classification system is one based on empirical data. Until the early 1980's, most states used subjective classification systems that relied upon institutional staff (wardens, custody supervisors, counselors, and psychologists, among others) to use their collective knowledge and experience to determine the appropriate security and custody arrangements for individual inmates.

Many correctional agencies have attempted to address the concerns of courts or their own correctional experts by validating the models they use to classify inmates. Validation is a means of establishing the proper weights to assign to each of the factors used to compute a classification score for an inmate. A validation study generally attempts to determine the extent to which a correctional agency's existing classification model accurately predicts inmate misconduct and escape potential. Several criminal justice standard-setting bodies have recommended, and some court decisions have required, that the variables used to classify inmates show demonstrated predictive validity. Courts have considered this especially important for inmates placed in close and maximum security custody arrangements.

A survey conducted in 1986 by the National Institute of Justice found that where states employ classification systems that have been validated, the number of inmates assigned to higher custody levels decreases from the number that were assigned to those levels before the systems were validated. In addition, states that modify their classification systems by using validated models usually find that the percentage of inmates they can classify at minimum custody levels with no adverse consequences is much higher than they previously believed possible.[26]

Despite the desirability of using a classification model that accurately predicts inmates' institutional behavior, several factors cause correctional organizations to resist drastic changes to their classification systems. No classification system is perfect in predicting an inmate's behavior. Ideally, all risk factors used in a correctional agency's classification model should have predictive validity. However, there is little agreement among criminologists on the factors that best predict inmates' institutional behavior. Equally important, development of a classification system always involves a great deal of subjectivity on the part of the correctional agency. The classification system used by a correctional agency generally reflects not only the predictive ability of the system but also the agency's risk management philosophy. Because all groups of inmates present some degree of risk to the agency, an argument could be made for confining all inmates to cells.[27] However, an argument also could be made for placing all inmates in minimum or medium security dormitories since the majority of inmates, even those with the highest classification scores, do not engage in severely disruptive behavior. Depending on the risk management philosophy of the organization, a risk prediction instrument can be selected to produce one extreme or the other, or something in between.

As a practical matter, the economics of prison construction and operation preclude a policy of placing all inmates in cells. Therefore, correctional agencies must determine which inmates they will confine to cells and which they will house in less secure settings. The decision

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[26] Jack Alexander and James Austin, Handbook for Evaluating Objective Prison Classification Systems, U. S. Department of Justice, National Institute of Corrections, June 1992, p. 4.

[27] Some correctional officials believe that their ability to confine all inmates to cells provides them the greatest control over inmates. However, there is little evidence that confining inmates to cells actually reduces the inmates' tendency to engage in aggressive behavior, and some experts believe that the institutional environment itself is the most significant factor in determining inmate behavior.

correctional agencies face in designing a classification system is essentially a decision of risk management, i.e., balancing the risks of experiencing undesirable outcomes from placing inmates in lower custody settings against the costs associated with placing inmates in higher custody settings.

CDC's Classification System

California was one of the first states to adopt an objective classification system and continues to have a system that is highly regarded by classification experts. CDC's classification process develops a numerical score which places the inmate in one of four security levels. This score is based on the length of sentence, age, marital status, education, military history, and behavior during prior incarcerations, if any, including escape attempts.

The classification score, together with other factors (discussed below), is used to place the inmate in one of the following security levels:

Score	Level	Type of Security
0 through 18	I	Camps and dormitories with a low security level
19 through 27	II	Open dormitories with a secure perimeter, armed coverage possible
28 through 51	III	Secure perimeter, armed coverage, cells adjacent to exterior walls
52 or higher	IV	Secure perimeter, internal and external armed coverage, cells non-adjacent to exterior walls

CDC's classification system was designed to allow for the placement of inmates in institutions other than those indicated by the inmate's score alone. It provides for placement exceptions based on "special case factors" because some inmate case factors that may present an unacceptable risk to the public are not adequately addressed by the classification model itself. Some special case factors are designed to allow inmates to be placed at institutions or facilities that address various needs of the inmate or the institutions. Case factors that address these needs include the inmate's pattern of good behavior, family concerns, work skills, and need for academic or vocational education. When a special case factor or an administrative determinant is present, the placement dictated by the inmate's classification score may be overridden and the inmate placed in a facility that is appropriate for his or her exceptional case factors. Many of CDC's special case factors are listed in Table 7.

TABLE 7

SPECIAL CASE FACTORS

Age (immaturity or advanced age)
Arson History
Good Behavior
Death Sentence
Departmental Review Board (requiring placement)
Disciplinary Problem
Escape History (breached perimeter/with force)
Enemy Problem
Prison Gang/Disruptive Group Affiliation (validated)
Family Concerns
Felony or INS Hold (actual)
Life Sentence
Medical Category/Treatment
Psychiatric Treatment
Public Interest Case
School or Drug Program
Sex Offense
Sexual Orientation
History of Violence
Vocational Training
Work Skills

Although CDC's classification model employs more than 20 variables for determining the inmate's classification score, in practice, the length-of-sentence variable tends to dominate the score, especially for inmates with sentences of more than 10 years. Furthermore, although the classification model is used primarily for determining the level of security of the prison necessary to safely house inmates and not to assign inmates to medium or maximum custody cells or to dormitories, assignment to a particular institution usually dictates placement in a cell or dormitory. Consequently, most inmates with sentences of more than 10 years are initially confined to cells. This feature of CDC's classification model implicitly reflects the collective risk management philosophy of the Department.

Upon entering the California State Prison system, an inmate is lodged in a reception center in one of 11 institutions. The reception center processing includes fingerprints and photographs plus medical, psychological, dental and educational examinations. The Correctional Counselor conducts the initial custodial interview, and if the inmate has had a prior incarceration in California's prison system and not yet been discharged, the file has to be requested from the parole region. Once the records or file arrives, the Counselor has the

necessary information on the inmate's prior behavior while incarcerated, enemies, gang affiliation, medical records and other factors that enter into the classification decision.

After the inmate's classification score is calculated and these other case factors are evaluated, reception center staff complete the Institution Staff Recommendation Summary, which contains their recommendation for placing the inmate in an institution that has the level of security dictated by the score and other factors. The final decision is made in the course of the review and approval ("endorsement") process conducted by Headquarters personnel, based, at least in part, on where vacancies exist in institutions of the appropriate level.

Usually, the housing (i.e., custody) placement of the inmate is done at the institution as a result of the discussion in the Initial Classification Committee hearing. This hearing, which by CDC policy must be conducted during the inmate's first 14 days at the institution, determines the inmate's assignment to a program of study or work, if that is indicated, and addresses any special needs of the inmate, such as those resulting from medical conditions. At some institutions, new inmates are assigned to designated facilities for orientation purposes. Sometimes, the inmate's placement is dictated by his work program assignment.

Following the initial hearing, the inmate may not have another classification hearing for 12 months, or the inmate may have several hearings, depending on his program needs, behavior and relocations. Under CDC's regulations, a classification committee must review each inmate's situation at least annually. This policy is designed to ensure that each inmate is placed in the lowest level possible, consistent with security needs. There may be various other hearings in the interim. Program hearings may take place, for example, upon the inmate's completion of education programs, training programs, or work assignments, or upon his request for a change in program or work assignment. The term "classification hearing" is used not only for hearings in which the classification score is the main focus, but for all the committee meetings at which potential changes in custody or security are under consideration. Routine hearings, which are held by the Unit Classification Committee (UCC), cover job and school placements and privilege assignments. The UCC also hears recommendations involving inmate transfers to other institutions. Other hearings are designated as Institutional Classification Committee (ICC) hearings. These hearings typically involve transfers of "problem cases" within the institution, including cases in which an inmate is assigned to an administration segregation unit or retained in administrative segregation for more than 30 days, cases involving inmate transfers to special housing units, and cases involving increases to the inmate's classification score based on disciplinary activities and incidents.

The UCC can refer difficult decisions and ambiguous situations to the ICC for resolution. In turn, the ICC can defer to CDC Headquarters, either to the Classification Services Unit (CSU) or to the Departmental Review Board, which is at the Director's level and represents the highest level of administrative remedy for an inmate.

Because the classification decision process involves so much that is judgmental, and because of the CSU's belief that institutional staff tend to be insular in their perspective, there is a heavily centralized "endorsement" process by which CDC Headquarters staff must approve most inter-institutional transfers, continuation of administrative segregation status and placements that result in higher levels of custody. CDC Headquarters staff are unwilling to put more placement decision-making in the hands of institution staff because they fear this would result in the institutions being too harsh and too restrictive and would deny inmates "due process." CDC Headquarters staff also believe institution staff's knowledge of statewide gang activities and the inmates' enemies is inadequate to delegate more decision-making authority to institutions.

On the other hand, the CSU staff realize that CSRs are not necessarily consistent in their approaches to the endorsement process and acknowledge that differences exist in how decisions are made by individual CSRs. Some CDC staff attribute this lack of uniformity to the subjectivity of the process and the lack of sufficient training for CSRs. At one time, apparently, CSRs had regular meetings in which views, experiences and solutions were shared so that there was more consistency in their approach. Now, with a lack of time for meetings and training and CDC's inability to put decisions into writing (either because of the idiosyncratic nature of the circumstances or because of the labor intensity and time needed to write memoranda), the need for training is even more dramatic. Staff at the institutions and at Headquarters acknowledged the strong need for training at all levels. In recognition of this problem, CDC is requesting a 1996-97 budget change proposal (BCP) for 11 CSR positions, with an intention of placing more emphasis on training. In anticipation of approval of this BCP by the Legislature, Department management has given the CSU approval to hire six new CSRs with the start of the new fiscal year.

The expectation at Headquarters is that with more training, the CSRs will handle more decisions on their own without needing to call Sacramento or defer action as much, and will be more consistent with one another in their outcomes. With more training in the institutions, and more explicit policies and directions, it should be realistic to expect that institution staff could also assume more responsibility and decision-making within their institution.

During an institution's classification and custody placement process, a Correctional Counselor I (CC I) is the inmate's principal contact. When an inmate is scheduled for a hearing, the CC I reviews the case, meets with the inmate and explains what to expect during the hearing and what recommendation will be made to the classification committee. While hearings may be conducted with only three members present, the hearings we observed frequently had as many as seven or eight individuals sitting at the table.[28] Inmates are asked for comments at the hearings, but very few have any questions or objections.

[28] CDC believes that most hearings involve only three or four institution staff and that other staff members may have been present at the hearings we attended only because the hearings were being observed. CDC provided no data to validate its belief.

The typical workload for a CC I is difficult to estimate, given the lack of data collected by the CSU. A general agreement between CDC and the Department of Finance sets the standard at 150 inmates per CC I for each institution. Most of the CC I's whom we interviewed claimed their caseload was at least 175 inmates. However, when we looked at the 1995 average daily mainline population of the institutions in relation to the number of authorized CC I positions and to the number of filled positions, the statewide average ratio was 147 for authorized CC I positions and 169 for filled ones. However, Headquarters classification staff indicated that a number of CC I's in the institutions are being used in other capacities (such as litigation coordinators or employee relations officers), so that the number of persons functioning as CC I's could be less than the number holding those positions. This, of course, would alter the working ratio.

FINDINGS

Generally, CDC is placing inmates in custody settings consistent with their classification scores and special case factors. In addition, it appears that inmates have a good understanding of the classification system and the basis for their current placements. Very few inmates appeal the decisions of the institutions' classification committees. The classification hearings that involve decisions other than those related to the score are heavily focused on assuring that inmates are afforded full due process.

Despite the overall acceptance of CDC's classification and custody systems by the courts, institution staff and inmates, we have several concerns about them:

1. CDC has not evaluated its classification system since 1986. Experts agree that classification systems should be reevaluated on a regular basis to incorporate the latest research on predictive factors and to account for changes in correctional policy. CDC itself recommended in its 1986 report that its classification system be reexamined at least every five years and called for the next evaluation to occur no later than 1990. From time to time, various legislators have expressed concerns about CDC's potentially over-classifying inmates. However, it has only been during the last 12-18 months that CDC had made an effort to initiate such a study. Currently, CDC has plans to evaluate its system during the next 12 months.

2. CDC has never validated its classification model. According to its 1984-86 study of its classification model, CDC attempted to validate the model but found that the influence of CDC's prisons on inmate behavior made validation of the model impossible without more carefully controlled research.

   Because each of the factors included in the classification model can significantly influence an inmate's placement, we believe it is essential for CDC to validate its classification model, despite the difficulty of doing so. Until it validates its model, CDC can reach no

meaningful conclusion about whether it is under-classifying, properly classifying, or over-classifying inmates.

3. Although CDC acknowledged in its 1986 report that prior institutional behavior is the best predictor of future institutional behavior, the primary determinant of the inmate's classification score in California, in particular for inmates with sentences of more than 10 years, is length of sentence. Our review of criminology literature suggests that length of sentence generally is not considered to be significant in explaining inmate behavior. Even CDC's own data raises questions about the weight CDC's classification model assigns to sentence length. Table 8 shows the incident rate for different ranges of values of the "Current Term of Incarceration" variable (referred to here as the "term factor") that is used to calculate the inmate's classification score when the inmate is first admitted.[29]

   The term factor categories in Table 8 correspond to the upper and lower point limits for Levels I-IV of CDC's classification system. The table is designed to show the incident rates of inmates whose length of sentence at admission, absent any other risk factor used in CDC's classification model, would place them in Levels I, II, III, and IV. As indicated by the table, although the incident rate for inmates with the lowest term factor, i.e., inmates who would be classified Level I if they had no other risk factors, is lower than the incident rate for inmates in the

TABLE 8

INCIDENT RATE BY LENGTH OF SENTENCE
1994 DATA

Term Factor[1]	Incident Rate[2]
0-18	7.7%
19-27	9.3%
28-51	9.1%
52 and over	11.5%

[1] This column reflects the score given to the inmates for "Current Term of Incarceration" on the Classification Score Sheet (Form 839). It equals 3 times the length of the inmate's sentence (in years), minus one, but is limited to no more than 59 points.

[2] This column reflects the percentage of inmates in the corresponding "Term Factor" (i.e., "Current Term of Incarceration") category who have committed incidents considered serious enough to be reported to CDC Headquarters on CDC's standard incident report.

   next three term factor categories, the differences in incident rates among inmates with different term factors are not of the same magnitude as are differences in incident rates

[29] The "Current Term of Incarceration" variable, instead of length of sentence, was used for this comparison because CDC is unable to generate accurate information on inmates' length of sentence from its Offender Based Information System without a great deal of effort.

among inmates in different age groups (see Table 9). Furthermore, there is virtually no difference in incident rates between the inmates with term factors corresponding to Levels II and III. In our judgment, this suggests that CDC is assigning too high a weight to length of sentence in determining the inmate's classification level.

Our review of criminology research literature also suggests that only two factors are consistently statistically valid in predicting inmates' institutional behavior: age and prior institutional behavior. This conclusion also was reached by CDC in its 1986 report[30] and recently was reconfirmed by a statistical analysis of CDC incident data performed at our request by the Robert Presley Crime and Justice Studies Center of the University of California, Riverside.[31] However, age, which tends to be statistically significant in all research studies of institutional behavior, carries a minor weight in CDC's classification model and custody policies. The classification model adds two points to the score of inmates who are under age 26. Otherwise, age does not enter into classification or custody decisions. Using CDC incident data from 1994, we have determined that the incident rate decreases steadily with age.[32] These results are displayed in Table 9, which also shows that Level III inmates who are older than 35 have an incident rate that is almost as low as the overall incident rate for Level I inmates and lower than the overall incident rate for Level II inmates. Despite this, on March 31, 1996, more than 10,000 CDC inmates older than 35 were classified Level III and more than 19,000 inmates older than 35 were housed in Level III settings.[33]

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[30] See California Department of Corrections, Inmate Classification Study Final Report, p. 29.

[31] Kenneth Fernandez and Max Neiman, The Adequacy of the California Inmate Classification System in Predicting Inmate Misconduct, unpublished. The analysis also tends to confirm our observation that length of sentence carries too much weight in CDC's classification model.

[32] This finding is consistent with many criminology research studies. See, for example, J. Petersilia and P. Honig, The Prison Experience of Career Criminals, RAND Corporation, Santa Monica, California, 1980.

[33] CDC contends that the incident rates for Levels III and IV inmates displayed in Table 9 would be even greater if it did not have armed guards supervising inmates at those levels.

TABLE 9

INCIDENT RATES BY AGE GROUP AND LEVEL
1994 DATA

Age	Level I	Level II	Level III	Level IV	All Levels
<26	7.0%	8.4%	14.2%	24.3%	12.6%
26 to 30	5.4%	5.7%	9.2%	20.4%	9.6%
30 to 35	3.6%	4.7%	7.5%	16.8%	7.4%
>35	2.5%	3.0%	5.0%	11.7%	4.7%
All Ages	4.1%	5.5%	9.1%	17.9%	8.1%

Despite the evidence, CDC believes length of sentence should continue to be the primary determinant of the inmate's classification score. CDC contends that length of sentence is important for determining the inmate's risk of attempted escape. However, it is not clear that sentence length is statistically significant in determining escape risk.[34] Furthermore, we believe it is possible to address risk of escape through perimeter security and prison design and that it is less expensive to do so than to build medium and maximum custody cells. Since Fall 1995, when CDC completed the installation of electric fences at most of its prisons, risk of escape should be substantially less than in 1986. In our opinion, the classification model should have been updated when CDC began installing electric fences, to reflect the lower escape risks. Furthermore, if it is necessary, as we have been told by CDC security staff, to change procedures (for example, traffic flow and the number of times inmates are counted) at Level II facilities to accommodate inmates who are considered greater escape risks, CDC should do so instead of spending substantially greater amounts of funds (see below) to construct Level III and Level IV cells for such inmates.

CDC also contends that length of sentence is important in predicting an inmate's propensity towards violence. To some extent, this appears to be borne out by the data in Table 8. CDC believes that preliminary data on incident rates for "Second Strike" and "Third Strike" inmates confirms this relationship. While a statistically valid relationship between length of sentence and violence among California inmates may exist, we do not believe it has been demonstrated by research published to date. Furthermore, the fact remains that fewer than 7.5 percent of CDC's inmates over age 30 who are confined to Level III cells engage in violent incidents. We believe this suggests that CDC needs to take a hard look at the weights assigned to various factors by its classification model.

[34] Tim Brennan, "Classification for Control in Jails and Prisons," in Prediction and Classification, Don M. Gottfredson and Michael Tonry, eds., p. 351.

4. As previously noted, CDC's risk management philosophy results in most inmates with sentences longer than 10 years being placed in cells instead of dormitories. This philosophy is decidedly different from that of several other states with large inmate populations. Those states, including New York, Texas, Arizona, and Florida, are more inclined to place inmates, even those with life sentences, in dormitories until they demonstrate behavior that necessitates placing them in cells.

5. Confining inmates who are not violent or otherwise disruptive to cells is far more expensive than housing those inmates in dormitories. According to our analysis of recent CDC data, it costs the State $5,163 more per inmate to construct a Level III cell for two inmates than to construct space for two dormitory beds, and $14,443 more per inmate to construct a Level IV cell for two inmates than to construct space for two dorm beds. (See Appendix G.) CDC's current construction plans call for most of its new prison beds to be Level III and Level IV cells. Because a typical CDC prison houses about 2,000 Level III inmates and 1,000 to 2,000 Level IV inmates, the difference in cost from constructing a prison using Level III and Level IV cells instead of dorms is more than $32 million. Furthermore, we estimate that, based solely on differences in staffing ratios, it costs about $17 million more per year to operate a prison designed for Level III and Level IV inmates than it does to operate a Level II institution. This difference in costs will become even more important as the full impact of the "Three Strikes" law is felt. Under that law, more inmates will be imprisoned for longer terms, many of them for life terms. Under CDC's current policies, most of them will be placed in Level IV cells.

6. During our visits to several prisons, we learned that counselors were unable to calculate the inmate's classification score and complete the Institution Staff Recommendation Summary until critical information was received from the county probation agency or, if the inmate was a parole violator, until the inmate's case file was received from the appropriate parole office. Often, Counselors delayed their case work for two to three weeks due to delays in receiving information from the referring court and probation agency or the parole office.

7. We also found that some institution staff who have been delegated the authority to reclassify inmates to lower levels under CDC's operating procedures have chosen to wait until the CSRs endorse those movements before making them. This would seem to indicate that more training and direction from the CSU is necessary for institution staff to understand their own roles and responsibilities, and to have the necessary training to implement them.

8. CDC may be requiring CSR endorsements for more actions than are necessary. There seem to be staff at the institutions who perform competently and who could make responsible decisions with perhaps only internal review and CSR monitoring. At most institutions we visited, there was a careful review process of all CC I recommendations.

Typically, a Correctional Counselor II (CC II) would approve all written documents. In many instances a Correctional Counselor III (CC III) also would review the recommendations. In addition, many of the final decisions are made within the classification hearing setting, which would include at least one other person besides the CC I and the CC II. In our opinion, this suggests that, with training and more explicit criteria for decisions, the review process in the institutions may be adequate without the present degree of CSR endorsements. Additionally, in the future, it may be that monitoring on a sampling basis would reveal that even the current degree of institutional review is redundant.

9. Some institution staff noted that there is variation among the CSRs in terms of how much documentation or what kind they will accept to endorse a committee decision. The experienced counselors in the institutions may present cases for endorsement based on what they know about the specific CSR who is due to visit their institution on a particular day. One institution counselor told of a decision made by a committee that was rejected by the CSR who told them what they needed to do. Reluctantly they followed those instructions and presented the decision to the next CSR to visit, who was amazed at the new approach and refused to endorse the decision and told the institution counselor how to handle the situation. As it happens, the second CSR's direction resulted in the same decision as institution staff had recommended in the first place. While this may be an extreme example, it does point to a need for greater consistency on the part of CSRs.

10. The institutions may be holding an excessive number of classification hearings. Hearings often are conducted when an inmate has credits restored or is eligible for and has requested a job change or some other program change. Facility Captains and counselors expressed the view to us that these two kinds of hearings were both time-consuming and not essential. Furthermore, perhaps as many as 60 percent of annual reviews currently result in no program change and no custody level change.

11. Although CDC covers routine placement decisions in its Department Operations Manual, few of the elements affecting the more complex decisions for inmate classification have been codified by CSU or even made explicit. This means that decision-makers at the institutions are largely dependent on their own experience and the intuitive understanding they have gained from that experience. Some of the decisions made by Headquarters are not promulgated to other classification decision-makers, either at Headquarters or at the institutions. Part of the reason for this is the belief that many of these decisions are so idiosyncratic as to not be relevant for other inmates. While this may be so, this reasoning overlooks the didactic benefit of sharing the process of reaching a decision, which should be of use beyond the circumstances of the individual inmate.

12. CDC is in the midst of a transition from many different automated systems covering particular parts of the Department's operations to an integrated, department-wide, database system. Determined to avoid errors and costly mistakes made in other

departments, CDC is moving deliberately and with a multi-phased approach. What does not seem to be keeping pace, at least in the area of classification, is a sharp scrutiny of what data are now being collected and in what form. For example, much of the information we used for our analysis of CDC's performance had to be gathered manually from institution staff, and much of the data we collected was recorded inconsistently by the various institutions, making analysis of the data problematic. Moreover, Headquarters management recognizes that the current data for some aspects of the classification operation are not accurate, but, instead of making a concerted effort to correct the situation, simply regards the data as serving no useful function.

RECOMMENDATIONS

Systemwide Recommendations

1. **CDC should validate its classification model no later than April 1, 1997 to give the Governor and the Legislature the opportunity to address possible changes in inmate housing during the legislative hearings on the 1997-98 Governor's Budget.** Given the competing demands placed on General Fund resources in California, it is incumbent on CDC management to ensure that CDC's classification system minimizes the number of inmates housed in expensive cells and that it does so without compromising the safety of the public, including prison staff and inmates. Validation is a necessary first step to achieving this objective.

2. **We recommend that while CDC is validating its classification model, it determine whether any of its Level III inmates who are at least 30 years of age can be safely housed in dormitories.**

Headquarters Level Recommendations

3. **We recommend that the CSU review its work processes to accomplish the following objectives: (a) establishing a comprehensive training program both for its own staff and for staff in the institutions; (b) transferring some responsibilities to institutional staff as their expertise increases; and (c) modifying its operations so as to conduct more endorsements and monitoring from Sacramento or regional offices.**

   We believe CDC's classification/custody process is ripe for "re-engineering." In our opinion, too many classification and custody decisions that can be made by institution staff and management are being made by Headquarters staff and management. However, the intent of our recommendation is not to decentralize CDC's policy-making process in this area, but to make all the participants in the classification process aware of standardized criteria and considerations by which decisions are to be made and to encourage CDC to allow decisions to be made at the lowest level possible. Among other things, we believe it

is essential that the CSU make explicit as many factors as possible that enter into its classification decisions. We believe this recommended move toward providing more information to the institutions would strengthen the uniformity and consistency of classification decisions and actions and not fragment them with individualized and subjective determinations. Documenting the placement decisions currently being made by Headquarters and reporting on the results of inmate appeals of hearing decisions should be part of the process by which the CSU trains institution staff.

In the course of doing this training and building a compendium of critical factors for classification decision-making, the CSU should examine all its work areas and activities to determine the appropriateness of the current division of responsibilities between Headquarters and institution staff. A re-engineering analysis of the existing process is likely to reveal areas where both greater efficiency and increased effectiveness can be achieved through procedural changes. Therefore, **we recommend that the CSU immediately conduct an objective assessment of its duties and responsibilities and consider changes that can be implemented as part of a pilot project with three or four institutions during 1996-97, with the reallocation of responsibilities among Headquarters and institution classification staff as its end objective. CDC's analysis of this pilot should also address the continued need for the 11 CSU positions included in the 1996-97 Governor's Budget.**

4. As noted in our Findings, inmates often spend a significant amount of time at reception centers awaiting the arrival of their case files from parole offices. We see little reason for the two- to three-week delays that often occur, and **recommend that CDC initiate efforts to reduce delays in reception center processing caused by delays in receipt of inmate records from parole offices. CDC should develop a formal plan for expediting reception center processing of inmates and submit it to the Youth and Adult Correctional Agency and the Department of Finance by October 1, 1996.**

5. As also noted in our Findings, the CSU is not collecting several useful data elements by which it can judge its performance and that of institution staff in administering CDC's classification system. Although staff at both Headquarters and the institutions believe that much of the currently inefficient and inconsistent data collection will be "cleaned up" with the implementation of the Correctional Management Information System (CMIS), it seems to us that useful information can be collected now and CDC should not wait for CMIS implementation to collect it. We believe that data which can be used to measure the effectiveness of institution staff and CSU staff in meeting organizational objectives, such as minimizing the length of time inmates spend at reception centers during various parts of the admission and classification processes and ensuring consistency of classification decisions, are important for the proper management of the Department and for minimizing State expenditures. Consequently, **we recommend that CDC designate a workgroup within the area of classification to reassess its current information needs. This workgroup should determine what data should to be collected from the**

institutions and from Headquarters, define the factors and indices that will be used to collect that information and determine the most useful collection format. We recommend that, at a minimum, CDC begin collecting meaningful data on reception center processing time, the number and types of classification hearings being held by institutions, and the number and types of endorsements made by CSU staff of institution staff's classification and custody recommendations. Additionally, there should be a process for "a feedback loop" that would return the data to the institutions. This would provide a check for accuracy, as well as make the collective data available to the institutions for their use.

Institution Level Recommendations

6. While most classification hearings last only a few minutes, counselors report that much of their time is spent in hearings. This was confirmed by our observations during visits to institutions. Even a few minutes per inmate for seven or eight persons, often including Associate Wardens, Facility Captains, counselors, program personnel, and security staff, make the hearings a major activity in everyone's week.

   In our judgment, when no issue is involved, and when there is no negative change for the inmate, and if the change is the logical outcome of previous activity (moving into the next level of a program, or going into an activity that was requested earlier and approved but for which there was a waiting list), there is little reason to convene a hearing. Consequently, **we recommend that CDC eliminate unnecessary classification hearings, including unnecessary annual hearings. We recommend that program reviews for which all parties agree that the request or action is appropriate and for which no significant issue is involved should not be scheduled for a formal hearing. We also recommend that if an inmate's annual reclassification review contains no program changes, does not involve a transfer request, will not result in an adverse action, is not contested by the inmate, and all the parties have reviewed and agreed to the plan, CDC not schedule a hearing.** The time savings, though only a fraction of a personnel year per institution, would allow counselors to spend more time with inmates on a day-to-day basis, to receive much-needed training, and to be more thorough in their work. Given that there were about 136,000 inmates as of January 31, 1996, a reduction of 60 percent of the annual UCC reviews alone would reduce the institutions' workload by 81,600 hearings per year. Systemwide, this could free up 20,000 or more hours of institutional staff's time to devote to more essential activities. **We recommend that these changes be implemented by January 1, 1997 and that instructions be sent immediately to all institutions giving specific details on how these two changes are to be implemented by that date.**

CHAPTER 4
METHODS OF FINANCING INMATE BEDS

INTRODUCTION

Since 1982, California has built 20 new prisons and expanded several others to accommodate an inmate population that has increased at a compound rate of more than 10 percent per year. The cost of this construction has been about $4.4 billion, and has been funded primarily from general obligation and lease-revenue bonds.

Like California, other states have experienced rapid prison population increases during the last two decades. To meet their needs for additional inmate housing, most states, including California, have constructed new prisons or added to existing prisons and have financed the costs of additional space by issuing general obligation or lease-revenue bonds. However, many states have been unable or unwilling to use traditional financing approaches and have leased beds from other states, from counties within and outside their state boundaries, and from private firms. This chapter discusses the various methods California and other states have used to address their inmate housing needs.

BOND FINANCING

California principally has used two methods of financing prison construction: issuance of general obligation bonds and issuance of lease-revenue bonds. General obligation bonds are backed by the full faith and credit of the State and must be approved by the voters in a statewide election. Interest and principal payments for general obligation bonds are made from the General Fund and do not require an appropriation by the Legislature. They must be sold on a competitive basis.

Lease-revenue bonds are a variation of revenue bonds, which are backed by the revenue to be generated by the project to be financed by the bonds. In the case of lease-revenue bonds, the revenue is a stream of lease payments made by the agency occupying the facility. Lease payments are made to the Public Works Board, which holds title to the facility until all lease payments have been made. The Public Works Board uses the lease payments to make the principal and interest payments on the bonds. The agency occupying the facility obtains the funds necessary to make the lease payments through an augmentation to its annual support appropriation. Because lease-revenue bonds are not backed by the full faith and credit of the State, they are not considered debt under the State Constitution. However, bond-rating agencies generally consider lease-revenue bonds to be part of the State's debt for credit-rating

purposes. Unlike general obligation bonds, they may be sold on a negotiated (as opposed to competitive) basis.

From a standpoint of costs alone, general obligation bonds are preferable to lease-revenue bonds. General obligation bonds typically carry an interest rate 0.2 to 0.5 percentage points below the interest rate on lease-revenue bonds. In addition, lease revenue bonds have slightly higher issuance costs (due to the need to purchase commercial insurance) than do general obligation bonds and require a higher value of bonds to be issued to produce the same net proceeds generated by general obligation bonds.[35]

However, lease-revenue bonds have several advantages over general obligation bonds. Unlike general obligation bonds, lease-revenue bonds may be issued without a vote of the electorate; only a two-thirds vote of the Legislature and approval by the Governor are required to authorize the sale of lease-revenue bonds. This can result in a substantial reduction in the time between the perceived need for additional bed space and occupancy of the facility. This time savings can produce a significant savings in overall construction costs, the amount of which depends on the rate of inflation for construction materials and labor.

Besides issuance of general obligation or Public Works Board lease-revenue bonds, prison construction can be financed through the issuance of lease-revenue bonds by a private entity. Because the funds are used for a public purpose, interest payments on these bonds are considered tax exempt by the Internal Revenue Service and, depending on the nature of the agreement between the State and the bond issuer regarding lease payments and other conditions applying to the bond, the interest rate may be approximately the same as that required on bonds issued by the Public Works Board. However, to receive an interest rate that low, the private entity would have to sign a firm long-term lease agreement with the State

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[35] In May 1995, the Legislative Analyst's Office published a report entitled, "Uses and Costs of Lease-Payment Bonds," in which the Office recommended that the use of lease-revenue bonds be limited because of their relatively high debt service costs. In response to that report, CDC contracted with a consultant with extensive experience in bond financing to assess the advantages and disadvantages of using lease-revenue bonds, as opposed to general obligation bonds, to finance prison construction. In September 1995, CDC published the consultant's findings and recommendations in a report entitled, "Prison Construction: The Choice Between Lease Revenue and General Obligation Bonds." The consultant's report took exception to the Legislative Analyst's use of the recent rate of inflation as the "discount rate" in calculating the present value of the debt service and noted that if a more reasonable discount rate had been used, the difference in the present value of the debt service costs between the two methods of finance is about 4 percent instead of the 7-10 percent estimated by the Legislative Analyst. The report also emphasized several advantages of lease-revenue bonds that were not discussed in the Legislative Analyst's report and recommended that the Legislature continue to use a mixture of general obligation bonds and lease-revenue bonds to fund prison construction.

The Department of Finance is generally in agreement with the findings and recommendations contained in the consultant's report. However, we note that the report erred in stating that the Legislative Analyst failed to offset the increased debt service costs of lease-revenue bonds by the amount of the reserve fund that is deposited in the General Fund when the lease-revenue bonds are fully repaid. After reviewing the Legislative Analyst's calculations, we have concluded that the Analyst's debt service calculations were made correctly.

or obtain a guarantee that the State would make all debt service payments in the event that it does not occupy the facility for the entire life of the debt.

The vehicle for securing lease-revenue bonds issued by a private entity is the entity's lease agreement or a lease-purchase agreement[36] with the State. The private entity either owns the facility in perpetuity or, more likely, owns the facility until the State has made all the lease payments, at which point the State may purchase the facility at a nominal price. Other things being equal, lease-purchase arrangements with a private corporation are likely to result in higher lease costs than lease-purchase arrangements with another government entity because of the private entity's profit motivation. However, some private firms that operate as well as build prisons for local and state correctional agencies tend to build prisons inexpensively because their profits are made through the operation of the prisons. Examples are Corrections Corporation of America (CCA) and Wackenhut Corrections Corporation. Although neither CCA nor Wackenhut lease facilities that they do not operate, there are other private firms that do construct jail and prison facilities using non-binding lease-purchase arrangements. One of these, Dominion Management, Inc., has built, or is currently building, facilities for the states of Colorado, Mississippi, Oklahoma and Virginia.

CERTIFICATES OF PARTICIPATION

Certificates of participation are shares in payments by a public or private entity for a lease or installment purchase agreement into which the entity has entered. They may be issued by the State or another government agency, or by a private firm. Under State law, certificates of participation are not treated as indebtedness of the issuer. However, depending on the nature of the obligation on the part of the leasing entity to lease the space from the issuing entity, bond rating agencies may or may not consider certificates of participation to be part of the issuing entity's financial obligations for the purpose of determining a credit rating. Certificates of participation may be, and usually are, sold through private offerings.

Certificates of participation have been used extensively by the private sector to finance installment purchase agreements involving expensive items, such as mainframe computers, telephone systems, and communications systems. Many firms doing business with the State have issued certificates of participation to obtain financing for installment purchase agreements with State agencies, and the State itself has used certificates of participation for financing the construction of highways and office space. Certificates of participation also have been widely used by California's local governments to construct court and jail facilities, administration buildings and parking garages, and to purchase expensive equipment. Some of California's school districts also have used certificates of participation to finance school

[36] Lease-purchase is a method of financing purchases of real property through installment payments. The entity leasing a facility does not receive title to it until all payments required by the lease agreement have been made. The terms and conditions of the agreement can vary according to the desires of the owner and the leasing entity, but the arrangement often entails the purchase of the facility at a nominal price after a specified number of years.

construction, and several community correctional facilities under contract to CDC have been financed by certificates of participation issued by local governments or private firms.

Certificates of participation also have been used by many states to finance the construction of prisons. Arizona, Colorado and Oregon are three states that have done so recently. In addition, four counties in the State of Pennsylvania have issued certificates of participation to construct prisons which they have leased to the Pennsylvania Department of Corrections. The counties, which have constructed more than 10,000 beds through this method, found this arrangement advantageous because of the jobs that are created by the operation of the prisons. The State of Pennsylvania found the arrangement advantageous because it was able to obtain additional cell capacity at a time when bond financing was not feasible. However, when it initially occupied the facilities, the state was paying lease costs that were 10-15 percent greater than the debt service costs it would have paid had it built the prisons itself.[37]

When certificates of participation are used to finance a construction project, a trustee (often a bank or other fiscal intermediary) is appointed to manage the interests of the certificate holders. Before the certificates are sold, the trustee enters into a lease, which may be binding or non-binding, with the agency that will occupy the facility when construction is complete. The trustee hires a firm to supervise the facility and disburses payments to the contractors as the milestones of the project are met. Lease payments by the occupant are collected by the trustee and disbursed annually to the certificate holders. The trustee retains title to the facility until all lease payments have been made by the occupant.

Because so few certificates of participation have been sold by the State, it is difficult to predict how the yield on State-issued certificates of participation would compare with the yield on a State-issued lease-revenue bond. Although market credit-rating agencies treat certificates of participation as equivalent to lease-revenue bonds, certificates of participation issued by local government agencies in California have generally carried slightly higher interest rates than have lease-revenue bonds issued by the State, even when the local agencies and the State have similar credit ratings. This may be due to a perception among investors that certificates of participation are more risky than lease-revenue bonds. Consequently, if, as in Pennsylvania, a county in California were to find it economically advantageous to build a prison to house State inmates, it is likely that the State's annual lease payments would be higher than if the Public Works Board were to issue lease-revenue bonds. Based on conversations with experts in credit financing, we estimate that certificates of participation issued by a large county with a good credit rating would carry an interest rate about 0.15 percent (15 basis points) higher than a comparable lease-revenue bond issued by the Public Works Board, and then only if the State entered into a secure long-term lease. In addition, unless the lease holds the county (the issuing agency) harmless from occupancy delays, a county may need to purchase additional credit insurance to obtain an interest rate this

[37] Conversation with Jacob Bleik, Director of Operations, Pennsylvania Department of Corrections.

favorable. It is likely that similar conditions would apply to private entities using certificates of participation to finance construction of a State prison.

The relative costs of using general obligation bonds, State-issued lease-revenue bonds, and county-issued certificates of participation to finance the construction of a $280 million State prison are shown in Table 10. The table shows both the total debt service over the 25-year life of the debt and the approximate annual debt service. The figures assume a general obligation bond rate (i.e., true interest cost) of about 5.9 percent, a lease-revenue bond rate of about 6.2 percent, and a certificate of participation rate of 6.35 percent. At today's interest rates (5.5 percent for a general obligation bond), these costs would be proportionately lower. Under other market conditions, they may be higher.

TABLE 10

COMPARATIVE DEBT SERVICE COSTS OF DEBT INSTRUMENTS ISSUED FOR PRISON CONSTRUCTION
(Dollars in Millions)

Credit Instrument	Annual Debt Service	Total Debt Service (25 years)
General Obligation Bonds	$11.6 to $25.4[a]	$476.4
Lease-Revenue Bonds	$26.0[b]	$561.6
Certificates of Participation	$27.3[b]	$578.6

[a] Annual debt service for general obligation bonds declines from $25.4 million to $11.6 million.
[b] For the first two years, there are no net debt service payments for lease-revenue bonds or certificates of participation. In the third year, the net debt service payment for lease-revenue bonds and certificates of participation are $8 million to $17 million, depending on the assumptions about various maturities of the bonds and certificates issued.

LEASING CELL SPACE

Most state correctional agencies, including CDC, have contracts with local government agencies, generally counties, within their own states to house and provide services for some inmates who are under the state's jurisdiction. CDC, for example, reimburses most city and county jail systems for housing parole violators until the State determines that the parole violators should be released or returned to prison. Generally, the cost of housing these inmates in city and county correctional systems is about the same as CDC's average cost per inmate per day, currently about $60.

CDC also contracts with 12 community correctional centers to house minimum and medium custody inmates. Currently, the inmates housed in these facilities generally are close to release and many are involved in work furlough or other "transitional" programs. Five of the twelve community correctional facilities are operated by private firms and seven are operated

by local government agencies. The per diem rates paid to the centers vary according to the agreements with the center operators. The State's 1995-96 cost per inmate per day under these agreements ranges from $35.25 to $43.49. Excluding facility lease costs, the State's cost ranges from $26.42 per inmate per day to $36.28 per inmate per day.[38]

Many states, including Alaska, Colorado, Iowa, Missouri, North Carolina, Oregon, Texas, Utah, and Virginia, have met part of their inmate housing needs by contracting with publicly- or privately-operated prisons in other states. Several others, including Idaho, Massachusetts, Michigan and Oklahoma, are considering doing so. In most, if not all, instances where a state contracts with a publicly-operated prison in another state, it contracts with a county correctional agency, not with that state's correctional agency. Currently, only counties in Texas are leasing beds to other state prison systems. These leases tend to be for short terms and are designed to address temporary needs that may exist only until the state is able to construct its own facility. Generally, the facilities are detention facilities designed for minimum custody inmates. However, several county facilities in Texas are able to provide housing and programming (jobs and academic and vocational education) for a limited number of medium and maximum security inmates.

Several states, and the Federal Immigration and Naturalization Service, are contracting for inmate housing with private corporations, such as the Corrections Corporation of America, Wackenhut Corrections Corporation, U.S. Corrections Corporation, and Management and Training Corporation. In these situations, the private corporation usually builds and operates the facility and the government agency enters into a multi-year agreement with the firm. In some cases, another private firm, or a county government, owns the facility and leases it to the private prison operator.[39] The private prison operator in turn enters into a contract with a federal, state or local correctional agency to house its inmates. Often, a local government agency (usually a county) enters into an agreement with the private firm to construct and operate the facility and another government entity is created as a pass-through entity to issue tax-exempt debt. The pass-through entity acquires title to the prison after it is constructed.

The rates charged by private firms and counties that provide beds for prisoners from other states range from about $22 to $90 per inmate per day. Differences in the rates often reflect differences in the degree of security of the facilities, type of inmates housed, types of programs offered, and types of services provided. Medical services and the amount of programs for inmates seem to play a very large role in determining the rate. Lease and debt service costs also are significant. Debt service charges included in the rates by privately-financed prisons may be higher than lease payments for prisons financed by state or local

[38] These figures are computed by dividing total anticipated 1995-96 expenditures by total beds, which consist of design beds, "free beds" and housing overcrowding beds.

[39] According to the 1996 census of adult correctional facilities operated by private firms, published annually by a faculty member of the University of Florida, about 70 percent of the privately-operated adult correctional facilities in the U.S. are owned by public agencies. See Charles W. Thomas, Private Adult Correctional Facility Census, Ninth Edition, March 15, 1996.

bonds or certificates of participation if the private corporations financed the prisons with taxable bonds or if the firms attempt to amortize their construction costs over a relatively short period, e.g., five or seven years. However, charges for debt service will depend upon the nature of the contractual agreement between the firm and the state. The per diem rates charged by private prison operators are financial decisions that may be affected by competition and the ability of the private firms to obtain financing from other sources, such as the issuance of stock.

The Department of Justice's National Institute of Corrections (NIC) recently conducted a survey of state departments of corrections that are using privately-operated prison facilities to address some of their needs for cell space. The survey indicates that 11 states have contracted with private corporations to operate prisons similar to those operated by the states themselves.[40] The survey also indicates that per diem rates charged by the private firms generally range from $23.49 per inmate per day to $38.90 per inmate per day.[41] In our discussions with staff of several state correctional agencies, we learned that one of the states included in the survey whose per diem rate was unknown at the time of the survey is paying $23.15 per inmate per day. Two states that were not included in the survey are paying about $50 per inmate per day and $59 per inmate per day. Based on our conversations with several of the states, it is likely that the lowest rates exclude per diem charges associated with debt service and depreciation and that all of them exclude the costs of major medical care and mental health services.

Based on the NIC's survey and other information we obtained, the cost of leasing beds in other states often appears to be substantially below the costs of housing the inmates locally. However, as the range of per diem rates suggests, it is important to determine what is included in the per diem rate before any conclusions are drawn. The lowest rates often apply to low-cost, minimum custody inmates, and to inmates who do not require significant medical or program expenditures. Furthermore, the rates may not include lease or lease-purchase costs, which are billed separately. As CDC's annual contracts with community correctional facilities indicate, lease costs can be substantial ($10 per inmate per day), even for facilities financed with low-interest, tax exempt certificates of participation.

In our survey of states that were contracting with county correctional agencies in Texas or with private firms, we found that:

1. Some of the states have just initiated contracts with private firms to house other than minimum custody inmates. Few of them have more than one year of experience with private operators of prisons. However, three states (Louisiana, North Carolina, and Texas) have been contracting with private prison operators for at least three years.

[40] U.S. Department of Justice, National Institute of Corrections, Privatization and Contracting in Corrections: Results of an NIC Survey, February 1996. The 11 states covered by the survey do not include Alaska or Oregon, both of which lease beds from the Corrections Corporation of America, at facilities located in Arizona.

[41] One state included in the survey was paying $90.19 per inmate per day.

2. One of the states currently housing inmates in Texas facilities had experienced problems with a county jail in Texas and decided not to renew its contract with the county. Among other things, the state was concerned about the costs of medical and transportation services and potential legal issues with inmates complaining about treatment they received in those facilities. Another state indicated that it was continuing its contract with a county in Texas but is using private vendors to meet its need for additional bed space instead of expanding its use of the Texas facility. The state has a need to provide education and work opportunities to inmates that cannot be met at the county jail facility. The representative of a third state, which houses more than 1,000 inmates in Texas county jails, indicated that the state is very satisfied with the services it is receiving and will continue its relationships with the counties. The representative pointed out, however, that the quality of services varies from county to county and that it is wise to evaluate the county programs and facility in person before entering into a contract with a particular county.

3. State correctional agencies that have used a private vendor for six months or longer generally are satisfied with the services they are receiving. However, all of them stress the need to carefully word the contract with the vendor to ensure there are no misunderstandings about the services that will be provided by the vendor. The persons with whom we spoke also stressed the need to employ an adequate number of staff to administer and monitor the contract and to address a myriad of issues that arise when inmates are sent out of state. Of particular concern was medical services, the costs of which often are difficult to predict and difficult to audit. One state indicated that it had some concerns about continuity of medical care being provided by the vendor, but it was able to resolve the concerns at no additional cost by working with the vendor.

4. Three states that have been using a private prison operation for more than a year indicated that they have found the vendor willing to negotiate changes in services to suit the state's needs and that the requested changes were made at a reasonable price.

CDC currently leases more than 5,000 beds from local law enforcement agencies and private operators of prisons. Additional analysis of the data discussed in this chapter would be required before we could conclude that leasing beds from other states or leasing additional beds from private operators of prisons, especially for some of the State's higher-custody inmates, is a cost effective approach for California. However, our survey suggests that leasing additional prison beds merits serious consideration by CDC.

CHAPTER 5
PRISON CONSTRUCTION COSTS

INTRODUCTION

CDC is required by statute to accept convicted felons and civilly committed nonfelon narcotic addicts from California courts when sentenced to imprisonment in a State correctional facility. Because of recent trends to incarcerate felons for longer terms, the California State Prison System continues to experience serious pressure from the growth of inmate population. Over the last ten years, the population in CDC institutions has increased considerably. On December 31, 1995 the population was 135,133 compared to 50,111 on December 31, 1985, an annual compounded growth of 10.4 percent. The growth in the last three years has been as follows: 9.6 percent in 1993, 4.7 percent in 1994, and 7.6 percent in 1995.

The current inmate population has surpassed the number of available double-celled and bunked beds in buildings designed for inmate housing. The situation has required the conversion of gymnasiums and dayrooms into temporary housing. Equally important, the anticipated increase in inmate population will soon outstrip the State's ability to safely house inmates, even with the emergency beds currently planned. CDC anticipates that the institution population will reach 219,795 by the end of fiscal year 2000-01, an average increase of 9.2 percent per year. This represents an increase of more than 84,000 in the next five and one half years, compared to an increase of about 85,000 in the last decade.[42] Moreover, according to the Department of Finance's 1996 Capital Outlay and Infrastructure Report, CDC will require $9 billion over the next decade to house its growing inmate population.

Because of the enormous burden this places on the State's taxpayers, it is important for CDC to economize on the resources required to construct these prisons. However, it is even more important for CDC to build prisons that economize on operating costs. Over a conservative 30-year life span of a prison, operating costs account for more than 90 percent of a State prison's life cycle costs. Since the inception of its New Prison Construction Program, CDC has had a philosophy of minimizing prison life-cycle costs by minimizing staff and other operating expenses. In doing so, CDC has designed its prisons with cell doors that can be locked and unlocked electronically, necessitating fewer guards to control inmate movement to and from cells; with food services operations in which food can be prepared in advance and reheated on the weekend, when fewer staff are working; and with electric fences, which greatly reduces the need for tower guards. The use of electric fences alone will save an estimated 763 personnel years and $40 million per year when all electric fences have been

[42] Source: CDC. Spring 1996 Population Projections, dated February 15, 1996.

installed. CDC's success in this regard is evident by its top rank among state correctional agencies in the number of inmates per uniformed staff member.[43]

Recently, some State legislators and others who have observed the growth in expenditures for correctional institutions have expressed skepticism that CDC is doing as well as possible in containing expenditures. In particular, they point to comparisons with other states as an indication that expenditures for prison construction in California are greater than necessary. For example, the 1995 Corrections Yearbook indicates that California is spending $99,568 to construct a medium security cell, whereas the average state spends only $54,133. Neighboring Arizona spends only $41,750 per cell, while low-cost states like Georgia, Texas and Florida spend $27,000, $24,000, and less than $22,000, respectively, per cell.[44] On the surface, it appears that California's prison construction costs per inmate are substantially higher than those of other states. This chapter explores that topic by comparing California's costs of building prisons with prison construction costs in four other states.

CALIFORNIA'S PRISON CONSTRUCTION COSTS

CDC has activated nine new prisons since January 1992. The most recent prison completed is the Salinas Valley State Prison (Soledad II) in Monterey County which will be activated in May 1996. The Salinas Valley prison was constructed as a medium/maximum security prison with design capacity of 1,024 maximum security inmates, 1,000 medium security inmates, and 200 minimum security inmates. Because most cells and dorms are now double-bunked, and CDC plans to convert the gymnasiums to house inmates, the actual occupancy is projected to be close to 5,000 inmates. The prison construction budget is $236 million ($195 million construction costs and $41 million fees and other miscellaneous costs). The Department has made changes to the Level III housing units so that Level IV inmates can be housed there temporarily. Table 11 contains details on Salinas Valley and other prisons built in California during the past few years.

[43] Camile Graham Camp and George Camp, The Corrections Yearbook, 1995, Criminal Justice Institute, South Salem, N.Y., 1995, p. 83.
[44] Ibid, pp. 45-46.

TABLE 11

CONSTRUCTION COSTS OF RECENT CALIFORNIA PRISONS

Institution	Date of Initial Occupancy	Total Cost (Millions)	Design Beds	Housing Overcrowding Capacity (HOC)	Cost per Design Bed	Cost per Housing Overcrowding Capacity (HOC)
Calipatria	Jan 92	$206.4	2,208	3,778	$93,477	$54,631
L.A.County	Feb 93	$206.6	2,200	3,950	$93,889	$52,293
North Kern	Oct 93	$170.0	2,492	4,464	$68,212	$38,079
Centinela	Oct 93	$198.6	2,208	4,158	$89,934	$47,757
Ironwood	Feb 94	$209.1	2,400	4,550	$87,136	$45,962
Pleasant Valley	Nov 94	$203.3	2,208	4,158	$92,069	$48,891
Valley State (W)	May 95	$166.8	1,984	3,454	$84,071	$48,291
High Desert	Aug 95	$266.0	2,224	4,196	$119,601	$63,392
Salinas Valley	May 96	$235.9	2,224	4,196	$106,063	$56,217

Source: Total Costs were obtained from CDC, Planning and Construction Division and were current as of March 1996; other information is from the Governor's Budget Summary for FY 1996-97, Table PUB-1, page 112. The costs for the last two prisons are not final and may change due to additional change orders and claims.

As shown in Table 11, the costs of recently-built California prisons have ranged from $170 million to $266 million and design capacity has varied from 1,980 to 2,500 beds. Due to double bunking and other changes, the Housing Overcrowding Capacity (the number of beds available to house inmates) is about twice the design bed capacity.

The average cost per design bed for these prisons has ranged from $68,000 to almost $120,000 and the cost per Housing Overcrowding Capacity (HOC) has varied from $38,000 to $63,000. Some of this variation in cost per bed is due to inflation but most of it is due to differences among the institutions in mission and in the mix of cells of different security levels. For example, Valley State Prison for Women is designed for women and accommodates most inmates in dormitories. The other facilities are designed for medium and maximum custody inmates, but one of them, North Kern, is primarily a reception center with a different mix of facilities than the other male institutions listed in the table. In addition, over the past few years, the Department has improved its design and construction methods and has adopted changes that may have reduced prison construction costs from the levels that would otherwise have been incurred. For example, CDC has made increasing use of prototype designs for its prison construction during the period represented by Table 11.

COMPARISON WITH OTHER STATES

The design of prisons, number of beds per prison, and classification of inmates housed in prisons vary considerably from state to state, making comparisons of prison construction among states very difficult. In 1989, based on its audit of California's prison construction program, the Auditor General's office stated, "A great deal of weight cannot be put on a comparison between California's prison program and programs in other states because it is

difficult to make meaningful comparisons between individual prison facilities."[45] Nevertheless, such comparisons often are made by members of the Legislature and by the media, based on data that are published periodically.

This section looks at two recent comparisons, one performed by the U.S. General Accounting Office and the other by CDC, and examines some of the possible explanations for differences in costs among states.

GENERAL ACCOUNTING OFFICE STUDY

In a May 1992 publication, the United States General Accounting Office (GAO) compared prison construction costs of 32 state prisons in 20 states and the District of Columbia, including California's Chuckawalla, Corcoran and Mule Creek State Prisons, and four federal prisons.[46] As displayed in Table 12, the GAO data show that California's three prisons ranked near or above the average of the 36 prisons in gross square feet per inmate and significantly higher than average in cost per bed. When compared to the weighted average of all 36 prisons, the three California prisons exceeded the weighted average cost per bed by 13 percent, 56 percent and 57 percent, for Chuckawalla, Corcoran and Mule Creek Prisons, respectively.[47] In addition, Corcoran and Mule Creek Prisons exceeded the weighted average gross square feet per inmate by 21 percent and 43 percent.[48]

We should note that the GAO study was conducted prior to CDC's adopting its current policy of double-bunking most of its cells. If the State's current housing patterns were applied to the three prisons, both the cost per bed and the gross square feet per inmate for the California prisons would be lower than that displayed in Table 12. However, other state and federal prisons in the sample also have increased the number of inmates per cell, making analysis of the impact of this change on the State's ranking problematic. CDC staff also noted that the California prisons included in the GAO study were built when the Prison Industry Authority accounted for

[45] State of California, Office of the Auditor General. An Audit of the California Department of Corrections' Construction of the San Diego Prison, April 1989, page II-6.

[46] United States General Accounting Office, State and Federal Prisons, Factors That Affect Construction and Operations Costs, Publication Number GAO/GGD-92-73, May 1992.

[47] In calculating the costs per bed for 36 medium security state and federal prisons, the GAO divided the total cost of a facility by the number of inmates that the facility was designed to accommodate. The total cost included costs of recreation, education and prison industries, as well as the costs of housing.

[48] The average gross square feet per inmate for the last four male institutions built or under construction in California is 504, which is 17.5 percent greater than the weighted average of the 36 prisons in the GAO study. The last four institutions in California and their respective square footage per inmate are: Pleasant Valley (489), High Desert (552), Salinas Valley (538) and Corcoran II (438).

TABLE 12
GAO SURVEY OF PRISON CONSTRUCTION COSTS

Prisons in GAO Survey	Cost per Design Bed	Gross Square Feet per Inmate
Mule Creek State Prison	**$88,277**	**624**
Corcoran State Prison	**$87,814**	**524**
High Cost Prisons Weighted Average[a]	$87,271	554
Chuckawalla State Prison	**$63,411**	**431**
Medium Cost Prisons Weighted Average[a]	$58,282	475
Weighted Average,[a] 36 Prisons	$56,374	435
Low Cost Prisons Weighted Average[a, b]	$17,730	215

Source: General Accounting Office (GAO), Publication Number GAO/GGD-92-73, May 1992
[a] The GAO defined the weighted average as the value of each item to be averaged (e.g., cost per bed) multiplied by its weight (design capacity) and the total of the products divided by sum of the weights.
[b] CDC indicates that the National Institute of Justice's National Directory of Corrections Construction lists three of the prisons in the GAO's low-cost prison group as "expansions," not new construction. Consequently, the true weighted average cost for the low-cost prisons and for the 36 prisons may be understated. Due to the timing of CDC's observation, we were unable to verify this or determine its impact on the overall conclusions of the study.

40 percent of the space allotted for inmate programs in newly constructed prisons. However, it is difficult to say how this affects the comparison with the other prisons included in the study. Furthermore, the fact remains that at the time the prisons covered by the GAO study were built, California was building prisons with more square feet per inmate than most of the other states included in the study.

The GAO study also reviewed per bed construction costs by type of structure and found that integrated structures (a single building design), on average, were the most costly of the three types of structures represented by the 36 prisons. The cluster type, which was used in the three California prisons, was the second most costly type, followed by a campus style structure.[49] The weighted average cost by type of structure was $73,555 for integrated, $64,012 for cluster and $47,129 for campus structures.

The GAO study was significant in that it found that "the most important factor contributing to the differences in prison construction costs per bed [among 36 prisons included in the GAO's sample] was the amount of space provided, measured in terms of gross square feet (GSF) per inmate."[50] Other factors cited by the GAO that might contribute to the cost differences were the type of building structure, the housing area design and layout, whether the facility was

[49] As used by the GAO, a cluster structure is a number of individual buildings that are interconnected and a campus style is a number of individual buildings that are not interconnected.
[50] U.S. General Accounting Office, Ibid., p. 2.

designed for a mix of security levels, and geographic location. However, by not explicitly addressing these and other differences among states, such as differences in the cost of construction materials and wage rates, land acquisition costs, and state tax rates, the GAO study left many questions about prison construction costs unanswered.

CDC COST COMPARISONS

In 1995, CDC compared California's prison construction costs with those of Georgia and Texas to determine the validity of comparisons made from such data. CDC's methodology was to contact prison construction staff in Georgia and Texas to determine whether each state had recently constructed a prison that was reasonably comparable in mission and security level to a recently constructed prison in California. After selecting a prison in each state and two prisons in California that were similar to those in the other states, CDC obtained detailed information on the construction costs of the Georgia and Texas prisons. CDC then attempted to make the pairs of prisons more comparable by adjusting the construction costs for major differences among the states that are beyond CDC's control. The adjustments made by CDC were for cost differences between the respective states in the following areas: wage rates for construction trades, seismic standards, land acquisition, equipment, environmental impact reports and mitigation, and utilities and other infrastructure.

Based on these comparisons, CDC concluded that California's prison construction costs, adjusted to eliminate factors beyond the State's control, actually are only 1 percent higher than those of Texas and 12 percent higher than those of Georgia.

The most significant of the items accounting for the differences in the unadjusted prison construction cost between California and Georgia, and between California and Texas, is the average wage rate for construction trades. Among the major construction trades, California's average wage rate of $30.25 per hour (based on 1994 data) is more than twice as high as the wage rate of $12.69 in Georgia, and almost three times the $10.70 in Texas. The lower average wage rates in other states make Georgia's prisons 12.7 percent less expensive than those in California and Texas's prisons 14.8 percent less expensive than those in California.

Other factors accounting for differences in unadjusted construction costs include seismic conditions, sales taxes, site acquisition costs, utility costs, and local permitting costs. California's seismic requirements are the most stringent in the nation. California's prisons are designed and constructed to the highest seismic category of Zone 4, while Georgia and Texas prisons are designed and constructed to a seismic categories of Zone 0 and Zone 1. California's sales tax rate for construction materials ranges from 7.25 percent to 8.25 percent, while Georgia's sales tax rate varies between 4 to 6 percent. Texas exempts all public works construction from paying sales taxes. For new prisons being built in Georgia and Texas, in most cases the owner of the land donates it to the state and pays for any environmental requirements. The landowner often also pays for the utilities and the city or county waives any local fees to encourage the prison to locate there. Together, these factors make Georgia's

prisons 20 percent less expensive than those in California and Texas's prisons 31 percent less expensive than those in California.

DEPARTMENT OF FINANCE COMPARISONS

After verifying that CDC was using correct data and that its assumptions about cost factors in the three states were correct, and after engaging in several discussions with architects, engineers, prison construction professionals and managers in several states, we concluded that the approach used by CDC to compare California prison construction costs with those in other states is basically a sound method for examining gross differences in costs among states. However, we believe that CDC also should have taken economies of scale into account. CDC is building the largest prisons in the country, much larger than the average prison being built in Georgia or Texas. In doing so, CDC has significantly reduced the cost of prison construction in California by taking advantage of economies of scale. After speaking to experts in prison construction, we concluded that the State achieves economies of scale of at least ten percent in comparison with the size of prisons being built in Georgia and at least five percent compared with those in Texas.

In replicating CDC's methodology, we used updated construction cost figures for both the California prisons and the comparison prisons in Georgia and Texas that CDC used for its analysis and assumed economies of scale equal to 10 percent for the Georgia comparison and 5 percent for the Texas comparison. In doing so, we found that after adjusting for factors beyond the control of CDC, construction costs per bed in Georgia were about 80 percent of those in California. A similar comparison of a Texas facility with a comparable California facility produced a construction cost per bed in Texas that was about 88 percent of those in California. In other words, California's prisons are about 25 percent more expensive to build than those in Georgia and about 14 percent more expensive to build than those in Texas. Details of these comparisons can be found in Appendix D, Tables D-1 and D-2.

We also attempted to compare prison construction costs in California with those in Arizona and Florida and with those of the Federal Bureau of Prisons. However, we used a slightly different methodology for doing so. First, we determined the construction cost of a representative California prison by subtracting the costs of the land, utilities, offsite costs, environmental mitigation costs and equipment costs. We did the same for a representative prison in Arizona and Florida and for the Federal Bureau of Prisons' prototype institution at Florence, Colorado. Then, the cost in each state was adjusted by the state's corresponding construction cost index, published by the Construction Industry Research Board (CIRB). The index is designed to measure differences in costs of labor, materials, taxes, and seismic conditions among states. Our adjusted California cost figure is therefore an estimate of what it would cost if the California prison were built in the comparison state. From these adjusted costs, we calculated the construction cost per bed in each state and expressed these as a percent of the corresponding California cost per bed.

To determine the comparability of the two methodologies, we also performed the same calculations for a representative prison in Georgia and Texas. Our analysis showed that the two comparison states selected by CDC have average construction costs of 84 percent (for Georgia) and 83 percent (for Texas) of comparable California costs after adjusting for differences beyond the control of the State (once again, labor and materials costs, taxes and seismic costs, as measured by the construction cost index, and land, utility, and environmental mitigation costs). These figures compare closely with the 80 percent and 88 percent figures we obtained when we used CDC's methodology. We concluded from this that the methodologies yield essentially the same results. This allows for more straightforward cost comparisons among states because the CIRB index is readily available for most states. Detailed worksheets and assumptions underlying these calculations may be found in Appendix E, Tables E-1 to E-5. The results of the two sets of comparisons are presented in summary form in Table 13.

Recognizing the limitations of the methodology in comparing costs of prisons that have hundreds of differences, it is clear that there is a wide difference in construction costs among the comparison group, even when only prisons housing similar types of inmates are compared. It is also apparent that a significant percentage of the construction cost differences cannot be explained by differences in labor and materials costs, taxes, seismic costs, land acquisition costs, the cost of utilities, and environmental mitigation costs. About 20 percent of the difference in prison construction costs between Georgia and California cannot be explained by these factors, which are clearly beyond the control of CDC. For the comparison with Texas, the figure is about 12 percent; for the comparison with Arizona, 33 percent; and for the comparison with Florida, 38 percent. For the Federal prototype prison, which is more expensive to build than are California's prisons, 24 percent of the difference in costs cannot be explained by these factors.

TABLE 13

COMPARISON OF PRISON CONSTRUCTION COSTS PER BED
CALIFORNIA, FOUR OTHER STATES, AND FEDERAL BUREAU OF PRISONS

State	Cost per Bed as a Percentage of California's Cost per Bed
California	100%
Georgia	80%
Florida	62%
Texas	88%
Arizona	67%
Federal	124%

Source: Department of Finance calculations. See Appendices D, E and F for details.

Among the other factors that could account for these cost differences are differences in:

a. use of inmate labor in constructing the prison
b. the state's security policies, including the type of perimeter security and the state's policy of housing medium and maximum security inmates in cells instead of dorms
c. types and quantity of programs for inmates
d. square footage per inmate, both for housing and programs
e. kitchen and dining facilities
f. the presence of gymnasiums
g. the estimated life of the facilities being constructed
h. use of electronics and other features to minimize injuries to staff and inmates
i. the state's use of prison design to minimize operational costs
j the types of materials used in construction

In our discussions with correctional representatives from the four comparison states and during our visits to those states, among the most significant differences we observed between the California prisons and the four states are the following:[51]

- Three of the four states use inmate labor to help in the construction of some prison buildings. Florida, for example, uses a contractor to complete the housing buildings, the health building, food services building and administration building for its medium/maximum security prisons. Inmates, including some medium and maximum security inmates, are then used to assist in building the dormitories and other support buildings. Work camps in Florida are built entirely by the inmates. Florida officials estimate that the state saves about 35 percent of the construction costs of the buildings through the use of inmate labor. Arizona officials, on the other hand, have also used prison labor but believe it does not reduce construction costs because of the additional staff needed to guard the inmate laborers. For minimum and medium security prisons, Georgia inmates assist in the construction of warehouses, the warden's housing quarters, and the perimeter fence. Georgia Department of Corrections staff estimate savings of 10 percent to 15 percent of the costs of this construction after accounting for additional inmate worker supervision costs. However, because Georgia does not use inmate labor on maximum security prisons, this difference between California and Georgia does not affect our comparison. Inmates are not used for new prison construction in California or Texas, except that both states use inmates to manufacture cell furnishings. Texas inmates produce all items used in prison cells, including the metal doors. California relies upon the Prison Industry Authority for equipment and planks that are used in constructing a prison and to assist in constructing dormitories at existing prisons, but generally does not use inmate labor on new prison construction projects. California's Planning and

[51] Because we were unable to obtain all the necessary information from the Federal Bureau of Prisons, the discussion covers only California and the other four states.

Construction Division staff have explored the possibility of using inmate labor for new prison construction and have drawn the same conclusion as did Arizona.

These differences in use of inmate labor to construct prisons account for about 3.8 percentage points of the difference between California's costs and those of Florida.

- None of the four states uses electric fences for perimeter security. Georgia, Florida and Arizona install motion detector systems on the inside fence. California's electric fence adds about $1 million to the cost of prison construction.

- One of the other causes of the differences in construction costs between California and those of other states is the difference among the states in the types of housing they use for inmates in a specific custody level. Dormitories for housing the minimum security level inmates are the least expensive to build. The costs increase for higher security levels. According to our analysis of recent CDC data for the Corcoran II prison, it costs $5,163 more per inmate to construct a medium custody cell than to construct space for dormitory beds, and $14,443 more per inmate to construct a maximum custody cell than to construct space for dormitory beds. (See Appendix G.)

  Arizona, Florida, and Texas house a much higher percentage of medium custody inmates, and to a lesser extent maximum custody inmates, in dormitories. Florida currently houses about 80 percent of its total inmate population, including most medium custody inmates, in dormitories. Texas houses 75 percent of its population, including medium custody inmates, in dormitories. Arizona houses about two-thirds of its medium-custody inmates in dormitories. As noted in Chapter 3, CDC houses a large percentage of its medium custody inmates in cells.[52]

  This difference in custody policies can affect any comparison of construction costs among states. To some extent it affects our comparison. A typical new maximum security prison in Florida, which was used for our comparison, has 288 beds in the dormitory buildings, representing 20 percent of the total beds in the prison. A comparable California prison has only 10 percent of the beds in the form of dormitories, which are used to house minimum security inmates who perform maintenance and clerical work around the institution. However, the impact of this difference on our cost comparison is small, explaining only 1 percentage point of the difference in costs between the Florida prison and the California prison we used for the comparison. The prisons in Arizona, Georgia and Texas that we used for the comparison have no dormitories, so the impact of the comparison is in the opposite direction. Here too, however, the impact is small.

[52] When the new institutions at Salinas Valley and Corcoran are fully operating, CDC will have added 78,333 beds at new institutions for males since the beginning of the New Prison Construction Program in 1983. Of those beds, 24,020 (30.7 percent) are in dorms and 54,313 (69.3 percent) are in cells.

- As previously noted, California's prisons had more space per inmate relative to the medium and low-cost prisons in the GAO comparison published in 1992. To some extent, space may be a surrogate for the amount of inmate programming, i.e., the percentage of inmates involved in programs such as vocational education and academic education. By law, California is required to provide work opportunities or educational program opportunities for all inmates. California builds its prisons with enough space to satisfy this mandate. For a prototypical prison, this usually means that the State's prisons have about 31.9 square feet of academic and vocational education space per inmate. Florida's prototypical prison for medium and maximum security inmates has only about 64 percent of that amount, 20.4 square feet. For the prisons used for our comparison, Georgia averages 16.9 square feet per inmate, Texas 18.5, and Arizona 38.1.

- Another area in which California builds prisons with more space is food services. California prisons have a central kitchen, a retherm kitchen and several food service satellites to enable it to confine inmates to their complexes and to minimize food service staffing costs. Because of this layout, the food services space at California prisons averages 22.3 square feet per inmate. Other states use a more traditional food service arrangement, in which all inmates are brought to a central dining area adjacent to the kitchen for meals. Georgia averages 21.2 square feet per inmate, Florida 10.7, Texas 11.5, and Arizona 12.7.

- After looking at the plans for California's Salinas Valley prison, both Florida and Georgia prison construction staff commented that California prisons appear to have more day room space per inmate than their prisons. In addition, the control rooms for the officers in the Level III and Level IV housing areas are larger in our prisons than in Florida and Georgia. California prison construction officials indicate that the size of the dayrooms and control rooms are dictated by the overall size of the housing units, which are designed to maximize the "line of sight" of both custody and non-custody staff, thereby minimizing the number of staff required to operate the State's prisons. Consequently, the life cycle costs associated with larger dayrooms and control rooms in California's prisons may be significantly less than those in other states, even though the cost of constructing that space may be greater than the cost incurred by other states.

  Although we were unable to obtain information on the amount of day room space and control room space in each of the five states, we were able to obtain the total amount of housing unit space (which includes control room and day room space as well as cell space and corridor space) per inmate for California prisons and the prisons of the other four states. California's prisons have about 159 gross square feet per inmate of housing unit space. Georgia's housing units have 167.2 gross square feet per inmate, Florida's 126.2, Texas's 124.4 and Arizona's 136.6. Assuming that about half of the cost of housing units are related to the cost of cell materials (e.g., concrete walls, floors and ceilings) and the cost of cell hardware, which we regard as fixed costs, we find that the above differences in housing space account for between two and four percentage points of the differences in

costs between California and Florida, California and Arizona, and California and Texas that are displayed in Table 13. However, the larger amount of square footage in Georgia's housing units actually increases the difference in costs between Georgia's and California's prisons displayed in Table 13, but by less than one percentage point.

- Florida does not build gymnasiums in its prisons while Arizona builds gymnasiums only when its prisons are located at elevations of 5,000 feet or more. Georgia and Texas build gymnasiums. California has continued to build gymnasiums, despite its policy of converting them to emergency housing units soon after they are constructed. This difference accounts for $4.8 million of the difference in costs between California and the other states.

- California prisons have electronic mechanisms in the control room for the Levels III and IV housing areas, including motor-driven cell doors for Level IV inmates. Arizona also uses a fairly sophisticated electronic system. Florida and Georgia have simpler systems, with cell doors that must be opened manually. This accounts for about $1 million of the difference in cost between the prisons being built by California on the one hand and Florida, Georgia and Texas on the other hand.

If we adjust the cost of California's prisons to account for all the differences listed above, the percentages displayed in Table 13 increase. The net results of the adjustments are displayed in Table 14.

TABLE 14

COMPARISON OF ADJUSTED PRISON CONSTRUCTION COSTS PER BED CALIFORNIA AND FOUR OTHER STATES

State	Adjusted Cost per Bed as a Percentage of California's Cost per Bed
California	100%
Georgia	81%
Florida	77%
Texas	98%
Arizona	72%

As indicated by the table, virtually all of the differences in the cost of constructing prisons in California and Texas can be explained by the factors discussed in this chapter,[53] but 19

[53] We should note that significant cost differences may still exist among cost categories for which Texas prison construction staff could not provide data, i.e., equipment and fees. As shown in Table D-2, we reduced the cost of the California prison chosen for our comparison by $37 million to account for the fact that the construction cost of

percent to 28 percent of the differences in costs of constructing prisons in California and the other three states in the comparison group have not been explained. Other major areas that may account for these differences are differences among the states in prison design, types of materials used to build prisons, construction techniques, competition among general contractors, and how well the states are managing their construction projects.

As previously noted, the GAO found that campus-style prison designs (several stand-alone buildings) tend to be less expensive than cluster-style designs (clusters of integrated buildings). California uses the cluster-style design whereas three of the four states (Georgia, Florida and Arizona) use campus style designs. The cluster-style design calls for, among other things, integration of electrical and mechanical systems that tend to add to the cost of construction.

California's prisons also have integrated heating-ventilation-cooling systems, which are more expensive than stand-alone heating and air conditioning units. Consistent with their campus-style designs, Georgia, Florida and Arizona use stand-alone heating and cooling units, one of each per building. The Texas prison we used for our comparison has a large heating unit and an air circulation system for its cluster of buildings, but no cooling unit. Although integrated heating-ventilation-cooling systems make California's prisons more expensive to build, the life cycle costs of integrated systems are significantly lower than the life cycle costs of the stand-alone systems.

To qualify for utility companies' "interruptable" gas rates, California also uses a liquified propane gas heating system as a backup source for fuel at prisons that rely upon natural gas for their primary source of heat. None of the other states uses this backup source of energy. As in the case of integrated heating-ventilation-cooling systems, this backup heating adds to the construction cost of a California prison (about $300,000), but CDC's analysis shows that the life cyle costs of the liquid propane gas backup heating system are substantially lower than that of a system without the backup. At today's gas rates; the payback period apparently is less than six months.

For the structural components of the inmate housing and secure support areas, the four states in our comparison group generally use similar construction materials, either reinforced concrete block or pre-cast concrete. However, we are unable to comment on differences in the thickness of the walls or ceilings of the structures. Adding or subtracting just one inch to walls and ceilings can add millions of dollars to the costs of constructing buildings.

Based on our discussions with prison construction staff of the four comparison states, there appear to be some significant differences among California and three of the other states in other types of materials used to build prisons. Georgia, Florida and Arizona use commerical

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the Texas prison used in our comparison excluded land acquisition costs, fees and equipment costs. Of that amount, $32 million is attributable to equipment and fees.

grade materials and hardware for buildings and rooms that are not used to house inmates, whereas California tends to use “industrial grade” (i.e., security) materials in areas like the central health unit. Texas uses materials and hardware similar to that used by California. And whereas California constructs its buildings with metal roofs, Florida and Arizona construct buildings using wood roofs and shingles. Georgia, like California, uses metal roofs, whereas Texas constructs its prisons by using more expensive pre-cast concrete roofs.

One difference in construction techniques we observed in one of the four comparison states (Florida) that may explain some of the cost difference between California's prisons and those in Florida is the use of modular cell construction. In theory, fabrication of cells offsite and delivering them to the site for assembly should be less expensive than building them onsite. However, the cost of transportation can be significant, and this technique may be cost-effective only where fabrication plants are located in close proximity to the prison. We understand that Florida's fabrication sites typically are very close to the prisons that are constructed using this technique.

The issue of competition among general contractors is one that cannot be easily verified, but Florida prison construction staff believe that Florida is more likely to obtain lower bids for its smaller, and therefore low-cost ($35 million), prison projects than is California because several small vendors are able to compete for the jobs. Companies that compete for California’s large construction projects must be larger, well-capitalized firms. If this is correct, Georgia and Arizona would be affected by this phenomenon because they also are building relatively small prisons (in the case of Arizona, small complexes).

Proper management of the construction process can affect prison construction costs by minimizing cost overruns and change orders and by economizing on fees paid for architectural designs, engineering, construction management, and inspections. We do not have data from all the states in these areas. However, we know that change orders have averaged 2.87 percent of construction costs for Georgia’s last 11 prison construction projects, whereas California’s change orders for the last nine projects have averaged 8.8 percent of construction costs. (See Chapter 6.) Construction management also relates to the state’s use of prototype designs to construct prisons. Used effectively, prototypes can significantly reduce the amount a state spends on architectural and engineering fees. California and the other four states use prototypes for many of their buildings. But there may still be large differences among the states in fees paid for architecture and engineering if some states do more site-adaptation of their prototypes than others when they construct new prisons. California, despite its heavy use of prototypes, spends 5 percent to 7 percent on architectural and engineering fees, primarily for site adaptation and construction support. We do not have comparable figures for the other states.

Although there may be legitimate reasons for the unexplained cost differences, we believe that these and other areas merit closer scrutiny because of the potentially major savings involved. Analysis of many of these areas requires engineering expertise that the Department of Finance

does not possess. However, when we began this study, we requested the assistance of the University of California in examining design issues, materials, and construction methods that might save taxpayer dollars if they were employed in building California's prisons. Coincident with our request, the State Senate requested the University's assistance for the same purpose. As a result of these requests, two engineering faculty members of the University of California currently are analyzing the issues we raise above and other issues that have been
raised by the Department of Finance, CDC, legislators and legislative staff members. The University anticipates that its preliminary findings will be available shortly after this report is published. The University also has agreed to undertake a more thorough analysis of these issues during the next 12 months.

OTHER DESIGN ISSUES

When visiting the Special Management Unit (SMU) II at the Eyman Complex in Florence, Arizona, we observed that they currently use some of their inmate space for multiple purposes. Specifically, we found that the Unit is using the inmate visitation areas for reclassification hearings, educational programming and counseling services.[54] In addition, the Unit uses its holding cells, space designed to house inmates pending transfer to or from the facility, for counseling and mental health services.

Conversely, as we reviewed California's prison designs and specifications, and as we noticed when visiting the state's prison, much of California's space is used for a single purpose, such as academic or vocational education, Board of Prison Terms hearings or religious ceremonies.[55]

In addition, when reviewing cost data for specific California prisons, we observed that the amount of space for certain buildings that are to be constructed at Corcoran II appear to be based on a specified allowance that does not take into account the number of inmates who will be housed in the facilities in which the buildings are to be situated. This is evident from the Corcoran II Cost Per Bed Data table in Appendix G. The Corcoran II prison is designed to house 1,512 Level II and 1,850 Level III inmates. Although there are 22 percent fewer Level II inmates, the amount of space allocated to the Level II facilities for uses such as Board of Prison Terms hearings, facility programs and support services (FPSS) activities, recreation (e.g., the gym) and satellite food services, is the same as that allocated to Level III uses. CDC indicated that this is due to its recent policy decision to design its institutions for

[54] SMU II is a Level IV and V facility and, as such, inmates are placed in individual/isolated cells with windows for visitation purposes. However, all cells are equipped with telecommunications equipment that allows an instructor to communicate with all cells at the same time. The instructor is located in a central area that is visible from all cells. Housing 768 inmates, the facility has two 12-cell visitation areas, each with a central area for visitors or instructors.

[55] We did notice, however, that different religious groups frequently share a common area and their religious functions are scheduled to accommodate the different groups.

specific “housing overcrowding capacity” levels. CDC stated that it was unable to eliminate this discrepancy by modifying its designs before the bid documents were released without experiencing an unacceptable delay in the project.[56] CDC's Master Plan model for constructing future Level II facilities has since been revised. However, the surplus support service space still exists in the Corcoran II design.

Although the focus of our review of prison construction costs was on institutions housing male inmates, another area that may need attention by CDC is the construction of institutions to house female inmates. While attending the American Institute of Architects' Conference on "Accommodating Special Needs: Design Challenges in the Correctional Environment," we heard correctional experts comment on the special needs of the female population. In particular, the experts stated that most female inmates can be housed in less secure prison facilities, without all the "concrete and steel" that is currently used in male facilities. The experts said that, with rare exception, female inmates are less violent to fellow inmates and staff, and are less likely to attempt to escape than their male counterparts. Moreover, some experts believe high security fencing, if any, is not necessary to safely guard female inmates from escape attempts. As an example, the Minnesota Correctional Facility in Shakopee, Minnesota is built similar to a college campus design without any perimeter fencing. The facility's warden indicated that the facility has experienced few, if any, problems because of its design. While we would not advocate the wholesale elimination of security measures at California prisons housing females, we believe CDC officials should take the experience of other states into account to determining what security features are essential at its women’s institutions and consider a broader range of settings for housing females.

To assess the construction cost of female prisons in California, we compared the total project costs for selected male prisons with the cost of the State’s most recent female prison, Valley State Prison for Women (VSPW). As shown in Table 15, we found that VSPW’s construction cost was 15 percent less than the average of the eight most recently constructed male institutions. If the costs of High Desert and Salinas Valley are excluded from the analysis because of unusual cost factors, including the higher cost of their “180” maximum security housing units, VSPW’s cost was 12 percent lower than the remaining six prisons.[57]

Although the data show that cost of constructing a female prison is less than that of a male institution, 90 percent of the women are housed in dormitory units, whereas in Level III and Level IV male institutions only 10 percent of the males are housed in dorms. At design capacity for VSPW, four women are housed in a 240 square foot dorm room (60 sq. ft. per

[56] Before the policy change, it was CDC’s practice to allocate enough housing space for about 500 inmates for each prison yard. This resulted in support services space that was approximately the same (per inmate) for each level of inmate. When its policy changed, CDC reduced the number of design beds in the Level II facilities at Corcoran II without adjusting the amount of support space for the reduced number of design beds.

[57] A comparison of housing unit construction costs only (Bid Pack 3) for the same nine prisons revealed similar results.

female inmate) with a single shower, sink and lavatory. Each dorm room is equipped with a locked door. At prisons housing Level III and IV

TABLE 15

COMPARISON OF TOTAL PROJECT COSTS FOR VALLEY STATE PRISON FOR WOMEN AND SELECTED CDC PRISONS

PRISON	YEAR	LEVEL	TOTAL COST (Millions)	DESIGN BEDS	COST PER BED	Inflation[a] Adjusted Cost/ Bed	VSPW Cost per Bed as a % of Average
Chuckawalla	Dec-88	I, II	$127.4	1,538	$82,823	$94,269	89%
Calipatria	Nov-91	I, IV	$206.4	2,208	$93,477	$99,141	85%
LA-County	Apr-92	I, III, IV	$206.6	2,200	$93,889	$99,955	84%
Centinela	Mar-93	I, III	$198.6	2,208	$89,934	$94,764	89%
Ironwood	Jan-94	I, III	$209.1	2,400	$87,136	$89,472	94%
Pleasant Valley	Aug-94	I, III	$203.3	2,208	$92,069	$93,257	90%
Valley State	Apr-95	Women	$166.8	1,984	$84,071	$84,071	100%
High Desert	Jan-96	I, III, IV	$266.0	2,224	$119,601	$117,460	72%
Salinas Valley	May-96	I, III, IV	$235.9	2,224	$106,063	$105,427	80%
Eight-prison average			$1,653.2	17,210	$96,061	$99,324	85%
Six-prison average[b]			$1,151.3	12,762	$90,215	$95,100	88%

[a] Note: Inflation adjustment based on a "cost multiplier factor" using Marshall & Swift, Marshall "Comparative Cost Multipliers", Section 98 for Fresno, California, April 1996.

[b] Excludes High Desert and Salinas Valley

Source: Data provided by CDC. The Department of Finance computed the inflation adjustment.

male inmates, the average cell size is about 71 square feet (60.3 square feet for Level III inmates and 81.5 square feet for Level IV imates), or 18 percent more space per inmate. Further, because of the housing unit design, female prisons should have 75 percent fewer cell doors and locking hardware. As a result, even though CDC is constructing female prisons at a reduced cost, we believe the cost difference should be greater than the current 12 to 15 percent.

RECOMMENDATIONS

Most of the data that we reviewed suggests the California prisons incorporate more space and reflect more costly designs and specifications than prisons located in other states. Although CDC has modified its prison designs to incorporate several cost reducing features, we believe it can and should continue to identify cost cutting opportunities and incorporate these cost cutting measures in the design and construction of future prisons. In particular, we recommend that:

1. **CDC be more creative in designing prison buildings so that non-housing space can be used for multiple purposes, thereby reducing the amount of gross square feet per inmate.** This includes space currently used for Board of Prison Terms hearings, family visitations, educational programs and religious chapels. The Department should determine whether educational programs, counseling, prison industries and other activities can efficiently and effectively be provided at night or on weekends so that existing space can be used more economically. A one percent reduction in the space allocated for education, counseling, visitation and religious activities by creative scheduling of space designed for multiple purposes would reduce prison construction costs by about $150,000.

2. **CDC consider eliminating gymnasiums from future prisons, as well as permanently converting existing gyms to dorms, especially in prisons where weather conditions would not preclude greater use of outdoor space.** Although gymnasiums can add up to $4.8 million to the cost of a prison, we would not advocate eliminating those funds from the construction budget for State prisons. Instead, we recommend that they be redirected toward providing additional inmate housing. Based on CDC's estimate that 17 new prisons are needed by the year 2001, elimination of gymnasiums would provide about $82 million that could be used to build additional housing units, thereby reducing prison construction costs after 2001.

3. **CDC review its current designs and specifications for female institutions and determine more cost efficient means of housing female inmates. Further, the Department should continue to explore the feasibility of using surplus military housing units or other public facilities, such as underutilized county jails and State hospitals scheduled for closure, to house female inmates.**

4. **The Legislature reconsider CDC's request to convert the Northern California Women's Facility to a male prison, provided CDC can make the conversion economically. We also recommend that, as an alternative to building another male facility, CDC determine whether any of the recently constructed institutions for women can be converted economically to a male institution.** CDC's recent estimates of population and bed needs indicate that its great immediate need for bed space is for Level I inmates. If CDC were to adopt our recommendation in Chapter 3 to place some of its older Level III inmates in dormitories, the need for Level II space would also increase. It may be feasible to address at least part of this need by converting a female institution to a male institution and using alternative settings for the female inmates. This would also give CDC time to design a new women's facility with less costly security features.

5. **CDC explore the possibility of adding an additional Level II housing unit at Corcoran II to take advantage of the surplus support services space that was built into the design for the Level II complex at that institution. This could reduce the cost of building a Level II facility at an institution that will have to be constructed in the future by at least $2.4 million**.

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CHAPTER 6
CONSTRUCTION MANAGEMENT PROCESS

INTRODUCTION

After preliminary discussions with legislative staff and construction experts who are knowledgeable of CDC's construction management process, we decided to review CDC's expenditures for change orders, which are modifications to the scope of the work expected to be completed by general contractors who are building the prisons. During the course of that review, we observed change orders that led us to review other aspects of CDC's construction management process. Our review of those areas was not intended to be comprehensive. Instead, we attempted to determine whether the procedures being followed by CDC were designed to minimize construction expenditures incurred by the State.

CDC'S CONSTRUCTION MANAGEMENT PROCESS

Under the traditional approach to construction used by public-sector organizations and by private firms, a prospective facility owner (1) hires an architect and engineer, or uses its own employees, to design the facility, (2) hires a general contractor or several general contractors to build the facility, and (3) hires a construction manager, or uses its own employees, to oversee the construction and perform inspections.[58] Unless the owner has its own employees for design and construction management work, the architect and engineer usually are hired based on their qualifications, the general contractor is hired through a competitive bid process, and the construction manager is hired either through a competitive bid process or a review of qualifications.

CDC hires architectural/engineering (AE) and construction management firms based on a review of qualifications, as it is required to do under Section 4526 of the Government Code, and hires general contractors through a competitive bid process. CDC also uses a combination of other private consultants and State employees to manage its prison construction projects.

Since the inception of its "New Prison Construction Program" in 1982, CDC has used a "Program Manager" to oversee the design aspects of the program and of each prison project; recommend design changes that will reduce costs; prepare the planning documents for each prison project; negotiate contracts with the AE firm selected for the project; prepare

[58] State law requires that construction managers for public works projects be hired based on qualifications; selection by competitive bid is not authorized.

construction drawings for the project's bid documents; and estimate construction costs, prepare project schedules and maintain the critical path information for the project.

CDC also uses the Program Manager to: manage the contracts of the AE firms by reviewing the designs and specifications delivered and by approving invoices for work performed before they are paid by CDC; provide ongoing support to CDC's Project Directors in evaluating design matters and in monitoring the project schedule; and provide ongoing support to the construction manager and contractors in the field regarding design decisions. Since 1990, CDC also has used the Program Manager to maintain its standard design documents (SDDs), which serve as prototypes for many prison buildings, and to maintain ongoing cost control reports that are used by other CDC staff to monitor the budget for each project

The Program Manager is selected for a five-year term through a Request for Statement of Qualifications process. Kitchell CEM, the current Program Manager, has held the contract outright since 1984 and held the contract in partnership with Rosser International between July 1982 and March 1983. Currently, the contract with Kitchell CEM is renegotiated annually, with CDC and Kitchell eventually agreeing on annual salary and benefit increases for contracted Kitchell employees, an indirect cost rate and a profit rate, and the number of hours of each contract employee's time required during the next fiscal year. The Department recently issued a Request for Statement of Qualifications" to begin the process of selecting a Program Manager for the next five years. However, the selection process was postponed until the funding situation for the New Prison Construction Program becomes clearer. The current contract with Kitchell is being continued on a semi-annual basis.

The other principal consultant used to manage prison construction projects is the Construction Manager. CDC informed us that construction management firms are selected for projects based on the firms' ability to devote experienced, high-quality staff to the projects and based on their past performance on CDC projects or jobs that are comparable to CDC's projects. CDC has used a variety of Construction Managers since 1983, but most firms selected to perform construction management services have been large construction firms, such as CRSS Contractors, Inc., Heery International, Turner Construction Company, and Fluor Daniel, Inc.

The Construction Manager is responsible for general administration of the contracts with the prime contractors who are awarded contracts to build a prison. Unlike many construction projects, CDC's prison projects are put out to bid in segments called "bid packages." Each bid package addresses construction activities that precede or follow the activities addressed in other bid packages. CDC and its Program Manager designed this multiple bid package process to reduce project delivery times. Table 16 lists the bid packages for a typical prison project. For each bid package, the general contractor with the lowest responsible bid is awarded the contract.

TABLE 16

PRISON CONSTRUCTION BID PACKAGES

Bid Package 1/6	Site Grading, Drainage, Onsite Utilities, Water Supply, Landscaping, Firing Range, Fencing
Bid Package 2	Offsite Utilities, Offsite Roads, Wastewater Treatment
Bid Package 3	Housing Units and Guard Towers
Bid Package 4	Secure Support Buildings
Bid Package 5	Vocational Education, Laundry and Misc. Metal Bldgs.
Bid Package 7	Warehouse, Firehouse and Misc. Metal Buildings
Bid Package 8	Non-Secure Support Buildings
Bid Package 9	Level I Facility
Bid Package 10	Sitewide Security and Communications
Bid Package 11	Central Health Services Building

CDC expects the Construction Manager to coordinate the activities of the prime contractors without managing their work. The duties of the Construction Manager include reviewing each contractor's detailed construction schedule to determine its adequacy for delivering a finished project in the time frame demanded; ensuring that necessary communication occurs among the prime contractors and between the prime contractors and their subcontractors; ensuring that the contractors are working at a pace that will satisfy CDC's project delivery schedule; working with Department of General Services, Division of the State Architect (DSA) inspectors to ensure that construction work is performed as required by CDC's plans and specifications before CDC pays the invoices submitted by contractors; negotiating proposed change orders[59] with general contractors; and maintaining the detailed paperwork associated with each project.

Although Section 7001 of the Penal Code makes CDC responsible for all aspects of prison construction, including inspections, CDC uses DSA to inspect the work of general contractors and to ensure that the AE firm's designs and specifications are followed. DSA prepares lists of construction deficiencies when they occur and reviews the invoices submitted by contractors for payment to ensure that the work has been performed and that its quality is satisfactory. DSA also reviews proposed change orders to determine whether they are necessary. Generally, CDC requires contractors to correct deficiencies noted by DSA before it pays them. However, CDC has the ultimate say in determining whether deficiencies are material and when contractors should be paid. In addition, CDC has the final say in determining when to pay a contractor for a proposed change order. Disputes between DSA

[59] "Proposed change orders" are changes to the scope of the work expected to be completed by the general contractor. CDC distinguishes proposed change orders from "change orders," which are contract documents that amend the base contract with the general contractor. A change order may include several proposed change orders.

and contractors or between DSA and the Construction Manager regarding the need to correct deficiencies or the need for proposed change orders are resolved by CDC's Project Director.

The Project Director, a State employee, plays a critical role in project delivery. The Project Director oversees the entire project, including design, to ensure that the project schedule is being met and that cost overruns are minimized. CDC depends upon the Project Director to work with all public and private agencies involved in a prison construction project. These include other State agencies, such as the Departments of Transportation, Water Resources and Fish and Game; local and regional agencies, such as county planning commissions, regional water and air resources control boards; utility companies; CDC's consultants (Program Manager and Construction Manager); other CDC divisions; and the Legislature. During the construction phase of a project, the Project Director is responsible for ensuring coordination among the Program Manager, AE firm, Construction Manager, prime contractors, and various CDC staff.

To enable the Project Director to carry out these responsibilities and to ensure timely completion of the project, CDC assigns one full-time Project Analyst and staff from other CDC divisions and branches to work with the Project Director. This project team usually includes staff with knowledge of, and responsibility for, telecommunications, security, engineering, real property acquisition, procurement of equipment and materials, contract management, fiscal management, accounting, and compliance with control agency procedures of the Department of Finance and the Public Works Board. In addition, CDC pays the Program Manager to assign staff to each project to manage its design aspects, to maintain critical path information, and to provide general assistance to the Project Director.

Another key State employee involved in CDC's construction projects is the Principal Construction Engineer. Among the responsibilities of the Principal Construction Engineer are ensuring that the Construction Manager maintains necessary documentation and that the Construction Manager is enforcing the "general conditions" of the general contractors' contracts with CDC. The Principal Construction Engineer also ensures that proposed change orders are necessary from a technical perspective, and that the work is not already covered under the contract, before the Project Director approves them.[60] Another important responsibility of the Principal Construction Engineer is ensuring consistency in the application and enforcement of CDC's policies and procedures across projects. The Project Director relies upon the expertise of the Principal Construction Engineer and his staff, in conjunction with the Program Manager's technical expertise, to resolve technical matters in the field.

CDC's Planning and Construction Division, the division responsible for managing the Department's prison construction activities, has established written policies and procedures in

[60] Until recently, the Principal Construction Engineer had responsibility for approving proposed change orders and change orders. Now, those responsibilities reside with the Project Director. However, the Principal Construction Engineer continues to review proposed change orders for their appropriateness and to review proposed change order documentation for completeness.

the form of "design and construction bulletins." Although we did not conduct an in-depth review of CDC's policies and procedures, three areas are of particular interest because of their potential impact on State expenditures: (1) the design review/design change process; (2) the process for acting on proposed change orders; and (3) the process for addressing AE errors and omissions in designs and specifications.

Design Review/Design Change Process

The design review process is intended to identify and correct design errors before the construction phase of a project and to incorporate desirable changes either in the project under design or in future projects. CDC has a formal process for reviewing the designs and specifications produced by AE firms prior to their dissemination with the bid package. Changes may be proposed by a number of persons involved in the prison construction process, including the Program Manager, AE, Construction Manager, and CDC staff, including institution staff. As we observed by reviewing two sets of logs maintained for tracking potential design changes, there are hundreds of design changes considered during various phases of each project.

All proposed design changes are reviewed by an Oversight Committee, which consists of the Chief of the Construction Operations Branch, the Program Manager, and the Chief of the Design and Activation Branch. The Program Manager maintains a computer data base of design and specification issues and tracks them until they are resolved. The Design Review Tracking Log and the Field Issue Tracking Report are used for that purpose. Once proposed changes have been approved, the Program Manager is responsible for ensuring that changes to the designs and specifications approved by the Oversight Committee are incorporated into the bid documents and, if appropriate, the standard design documents and specifications. CDC informed us that, in addition to this formal process, it has established an informal feedback process in which the Project Directors for various projects, the Program Manager, and the Chief of the Construction Operations Branch meet biweekly to discuss issues that arise during construction of the projects.

Proposed Change Order Process

If, during the construction phase of a project, it becomes necessary to change the scope of the work covered under a general contractor's contract, the vehicle for doing so is the proposed change order (PCO). Changes in scope may occur for several reasons: the original designs or specifications are in error and must be corrected; a misunderstanding occurs between the general contractor and the State regarding what is covered under the contract; CDC's experience with a recently activated prison suggests that design changes are necessary or desirable; a court decision or a change in federal or State law causes the Department to alter the environment for some or all inmates; or CDC management establishes new policies dealing with inmates, e.g., modification to the central health facility to accommodate new standards of care.

For changes that cost less than $5,000, Construction Managers have been authorized to approve any PCO they believe is necessary. For changes that cost between $5,000 and $10,000, Construction Managers, with the approval of the Project Director, may authorize the change. If a change costs more than $10,000, CDC has a formal review process that entails submitting information to Sacramento for review and approval before the change is implemented.

If a change is determined to be necessary, the Construction Manager prepares a Justification Record, which is a written justification for the change and an indication of the type of change, and a Risk Assessment, which indicates the likely impact of the change on costs and project schedule. If the DSA inspector and the Project Director determine that the PCO is required, the Construction Manager issues an RFP to the contractor and prepares a detailed cost estimate, known as the "State's Estimate." Upon receipt of the price quote, the Construction Manager, on the basis of the State's Estimate, may accept the price of the contractor. If the Construction Manager believes the price quote is too high, he enters into discussions with the contractor to clarify the scope of the work to be performed and may enter into negotiations to obtain a better price. Once the discussions and negotiations have been completed, the Construction Manager submits the Justification Record, Risk Assessment, RFP, State's Estimate, contractor's estimate, Record of Negotiations, and Milestone Spreadsheet to Sacramento for approval. The PCO materials are first reviewed by the Principal Construction Engineer and, later, by the Project Director. The Project Director has final approval authority. Once the PCO has been approved, the Construction Manager issues an Order to Proceed to the contractor.

Errors and Omissions Review Process

In September 1989, CDC established a process for analyzing and resolving potential design errors and omissions and for recovering State expenditures that result from them. The process begins with the Construction Manager maintaining a log of PCOs that appear to have been necessitated by AE errors and omissions in design documents and specifications. After a PCO has been processed and an RFP issued to the general contractor for work needed to correct a potential error or omission, the Construction Manager completes CDC's Notice of Error or Omission form and sends it to the Program Manager for analysis. The Program Manager reviews the documentation submitted by the Construction Manager, verifies that the PCO is attributable to an error or omission, calculates the fiscal impact to the State, and sends its comments to the Project Director. The Project Director then decides whether to forward the Construction Manager's log and the Program Manager's comments to the AE for response. If the log and comments are forwarded to the AE, CDC requests a response within 20 days. In most cases, the facts of the situation are straightforward and no response is necessary. However, in cases where the AE disputes the findings of the Construction Manager, additional analysis by the Program Manager and CDC staff may be required to determine whether an error or omission occurred.

Before CDC makes its final payment to the AE firm to close out a project, the Program Manager produces a consolidated errors and omissions report for all the bid packages in which the AE firm was involved. If the errors and omissions for a project are regarded as excessive, CDC may seek reimbursement for the State expenditures incurred because of the PCOs. CDC has established three percent of the value of the base construction contracts as the threshold above which it considers design errors and omissions to be excessive.

Our assessment of how well these processes are working is contained in the Findings section of this chapter.

Methodology

During the study, we interviewed CDC Division of Planning and Construction management and key project staff regarding their roles and responsibilities in managing prison construction. We also interviewed staff and management of the Program Manager and other non-CDC personnel involved in prison construction management, including former and current construction managers and DSA inspectors, and persons who have worked as engineers or general contractors on State prison projects. During our interviews of non-CDC personnel, we asked those we interviewed for their assessments of how well CDC's management process was working and for their suggested changes to the process. We also conducted an in-depth review of the proposed change orders on seven prison projects.

FINDINGS

1. In our discussions with construction experts who are knowledgeable of California's prison construction program, we heard both compliments and complaints about the CDC's construction management process. Some of the respondents told of continuing problems; others indicated that problems existed when the new construction program began but seem to have been corrected.

   It is difficult to assess the extent of these problems because most of them were not cited by all respondents and because they were not substantiated with written evidence. However, our review of PCOs seemed to confirm one criticism, the occurrence of numerous design errors, which was almost universally cited as a problem. Many respondents felt that, considering the amount of resources devoted to the design review process, there are too many design errors. Several respondents praised CDC for improving the decision-making process by expediting decisions, especially decisions to proceed with PCOs that are clearly warranted. Some also praised CDC for expediting the payment of contractors who had satisfactorily completed milestones.

2. As noted above, we observed numerous design errors during our review. The number of design errors and omissions raises a question about how well the Program Manager is doing its job of reviewing the AE's work before the construction documents are disseminated to contractors with the bid package. Ultimately, it is the AE's responsibility to ensure accuracy and completeness of the designs and specifications. However, the Program Manager is responsible for "quality control," i.e., conducting design reviews for accuracy and completeness. We raised this issue during our conversations with representatives of the Program Manager and were told that Kitchell employees thoroughly review the designs and specifications and attempt to catch all errors; however, Kitchell has a limited number of staff assigned to this activity, and there are hundreds of design and specification issues with which to deal. To catch more errors than they do now, more staff would have to be assigned to this activity, or additional time would have to be allowed to complete it. Having reviewed the negotiation records between CDC and the Program Manager, it is clear to us that CDC annually decides how many resources to request of the Program Manager and can direct the Program Manager to allocate its employees to any activity CDC chooses.

   Judging from the number of errors we observed, it appears that CDC should direct its Program Manager to assign more resources to design review activities or take a firmer stand with AE firms regarding errors in designs and specifications.

   CDC indicated that when it allows bid documents to proceed with known design or specification errors, it does so after determining that the projected (inflationary) cost of delaying the bid documents will exceed the cost of correcting errors through the change order process. However, as we note in Finding 9, it is not clear that CDC is succeeding in

minimizing overall project costs by rushing projects to bid and addressing design and specification shortcomings through the change order process.

3. There seem to be several problems with keeping the SDDs current. We were told by the Program Manager and by engineers familiar with the SDDs that the computer-assisted drafting (CAD) files that contain the standard design drawings are very complex and therefore expensive and time-consuming to modify. Consequently, the SDDs are updated infrequently. In fact, we were informed by the Program Manager that, because of time pressures, in lieu of modifying its SDDs the Department often uses the CAD designs submitted by the AE for the most recently completed prison, together with hand drawn amendments contained in supplemental materials distributed after construction was underway.

   Considering the number of design errors we observed, it is evident that the SDDs need to be modified. CDC claims it has not had the time or funds to make the necessary changes. However, the number of projects on which these errors occur lead us to question whether shortage of funds is a major factor in CDC's decision to allow design errors and omissions to be corrected through change orders instead of correcting them before the projects go to bid. Planning funds, which CDC said is the source of funds that would be used to modify the SDDs, have been appropriated to CDC in advance of most projects built during the past ten years.

   We believe that besides increasing the cost of building prisons, this practice of correcting errors through change orders creates ongoing problems. Because of CDC's reluctance to update the SDDs and specifications in a timely manner, the Program Manager must keep track of numerous changes and incorporate them into "addenda" as hand drawn designs and accompanying narrative. Often, the bid packages are issued with two or more addenda, each containing more than 100 items and corresponding drawings. In addition, the AEs must work from CAD drawings prepared by several AE firms that prepared the SDDs or source documents for prior projects and from hand-drawn architectural drawings contained in addenda and construction bulletins that were issued after construction of the most recently constructed prison was underway. Considering the volume of these adjustments, it is not surprising that errors and omissions frequently occur in the AE's designs and specifications.

   Design errors may also arise inadvertently because CDC's prototype buildings have been designed over a period of years by different architects. Consequently, the designs for different buildings have not been standardized, i.e., they contain different levels of detail or use inconsistent references. To address this problem, the Program Manager has advocated creation of a "design library" to minimize design errors. Although the Program Manager believes the costs of creating the design library would be more than offset through reduced design costs and reduced errors and omissions, CDC has been unwilling to authorize the Program Manager to take the time and spend the funds to create one.

Recently, when it had time to create such a library, CDC stated it lacked the funds to do so. CDC indicated that on several occasions during the last two years it had requested planning funds that could have been used for this purpose but that the funds had been denied by the Legislature.

CDC staff also indicated that some design errors may enter the process when AEs make unauthorized modifications to the SDDs during their site adaptations and the modifications go undetected. If an AE's design changes allow errors and inconsistencies to arise, the State incurs additional construction costs unless the AE is held fully accountable for errors and omissions.

4. The change order process needs improvement. There are too many PCOs, and they are not decreasing in number, as one would expect as the Department becomes more experienced in constructing prisons. This is evident from the figures displayed in Table 17, which lists the number of PCOs for the seven projects we reviewed and two other recently completed prisons, and Table 18, which lists the total value of proposed change orders and change order costs as a percentage of contract awards, by bid package, for eight of the last nine prisons projects completed.[61]

   As Table 18 indicates, total change orders as a percentage of initial bid awards range from 6.6 percent to 11.2 percent. As part of the appropriation for each new construction project, CDC (and other State agencies) receives a standard five percent of the construction value of the project to be used for "contingencies."[62] CDC exceeded its contingency budget for each of the eight projects displayed in Table 18. Even for bid packages 3, 4, 5, 7 and 8, for which prototype buildings have been developed and used on several projects, the change order percentage frequently exceeded five percent of the initial contract award.

[61] Salinas Valley prison is not included in Table 18 because several proposed change orders are still pending. While most of the potential PCOs have been identified, for many pending PCOs the costs have not yet been negotiated with the general contractor. Based on information available to date, we estimate that the total value of PCOs for Salinas Valley will be between $6.9 million (4.1 percent of the bid award totals) and $9.3 million (5.6 percent of the bid award totals).

[62] Section 6564 of the State Administrative Manual specifies that this "construction contingency" is to be used for "unforeseen emergencies or design shortfalls that may occur once a construction project has commenced."

TABLE 17

NUMBER OF PROPOSED CHANGE ORDERS BY INSTITUTION

Institution	Initially Opened	Number of PCOs
Mule Creek	June 1987	922
R.J. Donovan	July 1987	475[a]
Pelican Bay	December 1989	783
Calipatria	January 1992	529[a]
North Kern	October 1993	506
Pleasant Valley	November 1994	512
Valley State Prison for Women	May 1995	744
High Desert	August 1995	764[b]
Salinas Valley	May 1996 (est)	824[c]

[a] The number of PCOs for these prisons are based, in part, on extrapolations. Although we were able to review at least 75 percent of the change orders for these projects, CDC was unable to locate some of the change order files for our review.

[b] The number of PCOs for this prison include 17 that were still pending as of May 20, 1996.

[c] The number of PCOs for this prison include 200 that were still pending as of May 15, 1996.

TABLE 18

CHANGE ORDERS FOR SELECTED PRISON CONSTRUCTION PROJECTS
(Dollars in Millions)

	Calipatria	North Kern	L.A. County	Centinela	Ironwood	Pleasant Valley	VSPW	High Desert[1]
Total Costs	$206.4	$170.0	$206.6	$198.6	$209.1	$195.7	$162.3	$253.6
Initial Bid Award Totals	$147.4	$119.6	$136.9	$133.0	$140.3	$125.3	$113.3	$183.4
Change Order Costs	$9.8	$13.1	$10.2	$12.1	$15.3	$14.0	$7.5	$15.1
Change Orders as a Percent of:								
Total Costs	4.7%	7.7%	4.9%	6.1%	7.3%	7.2%	4.6%	6.0%
Initial Bid Award Totals	6.6%	11.0%	7.5%	9.1%	10.9%	11.2%	6.6%	8.3%
CHANGE ORDERS AS A PERCENTAGE OF INITIAL BID AWARD TOTALS, BY BID PACKAGE								
BP 1	3.5%	0.0%	22.3%	11.1%			5.4%	12.0%
BP 2	1.4%	6.3%	8.0%	8.0%	24.2%	6.7%		26.0%
BP 3	4.1%	5.8%	2.7%	5.6%	3.1%	9.0%	4.5%	3.4%
BP 4	7.6%	12.3%	4.7%	6.7%	22.8%	8.3%	5.9%	6.0%
BP 4A					20.2%	5.9%		
BP 5	7.9%	4.9%	3.4%	12.1%	2.8%	9.4%	13.8%	4.7%
BP 6	4.3%	22.4%	11.1%		8.5%	22.0%		
BP 7	6.5%		14.7%	6.4%	6.2%	7.5%		
BP 7A					20.2%			
BP 7B					20.3%			
BP 8	3.8%	8.4%	14.7%	11.1%	4.3%	10.4%	6.8%	12.5%
BP 9	30.2%	5.7%	6.8%	48.9%	6.4%	9.8%		
BP 10	38.2%	3.0%	18.3%	9.7%	31.3%	6.4%	20.7%	23.9%
BP 11	1.3%	11.5%	53.7%	60.0%	17.4%		9.1%	4.0%
BP 12	2.5%		4.8%	15.0%	17.5%			3.4%

[1] CDC has initiated actions to recover some of the costs associated with change orders for this prison. Until the funds are recovered and all pending claims and disputes are resolved, the figures for High Desert must be regarded as estimates.

5. In our conversations with Planning and Construction Division staff and management, we were informed of various feedback mechanisms the Division uses to incorporate changes in designs and specifications in future projects to avoid repeating problems encountered on past and current projects. However, the volume of PCOs, in particular the volume of PCOs caused by design errors in bid packages containing standard design buildings that have been constructed numerous times, suggests that CDC's feedback mechanism for incorporating things learned on one project into future projects is not working as it should.

6. Many change orders were initiated by CDC, not by Construction Managers or contractors. Several of these PCOs were initiated because CDC changed the design of a prison while construction was underway. In some cases, CDC could point to changes in policies related to changes in federal or State law as the rationale for the design changes. In other cases, we were told that problems were found at prisons that had recently been activated and that CDC wanted to prevent the problem at other prisons that were under construction. However, based on these and other comments by CDC staff and non-CDC personnel who are knowledgeable of CDC's prison construction, and based upon the volume of proposed change orders initiated by CDC, it is apparent that CDC does not treat the contingency amounts allocated by the State for new construction projects solely for unforeseen emergencies and design shortfalls discovered once construction has commenced, as specified in the State Administrative Manual. Instead, it appears that CDC considers the construction contingencies to be part of the project's budget, to be used for construction purposes it believes are appropriate.

7. Many of the PCOs that were initiated by CDC appeared to have been caused by lack of adequate review. This seemed to be a particular problem with reviews by security staff. For example, during the construction of the prison at Calipatria, additional security grilles were found to be required at various rooms. The total cost of the PCO was $258,197. Also at Calipatria, the contract documents did not specify security screws as being needed. Total cost to add them: $104,153. Also at Calipatria, a change order was needed to install an inmate monitoring and recording system. Total cost: $208,729. At North Kern, a change order was needed for shower controls at Level III housing units. The contract drawings showed shower controls were needed only at the Administrative Segregation building. In addition, privacy panels had to be added for all showers except those in the Administrative Segregation Unit. Total cost: $254,927.

   Although, these errors, like design errors, do not add major amounts to the costs of prison construction,[63] they appear to be avoidable.

8. CDC has some flexibility to stay within its construction budget by substituting less expensive materials and reducing the amount of programs, e.g., academic and vocational

[63] The cost of oversights by CDC are difficult to ascertain because CDC does not formally review these errors, as it does the errors and omissions committed by AE firms. However, we believe the costs to be comparable to those resulting from AE errors and omissions.

education space, or equipment at an institution. The Planning and Construction Division even recognizes this in its Design Bulletin Number 2, "Design Review," which states: "If overruns appear [in the AE firm's design documents], the A/E works with the PM Project Manager, Project Director, and the CDC QA [Quality Assurance Unit] and their respective teams to bring the project back within budget. Changes of materials and construction methods will be investigated first; reduction of scope will be used only as a last resort." Although this bulletin refers to the design phase of projects, the same principle applies during the construction phase. However, once a prison enters the construction phase, CDC's flexibility to make extensive changes is greatly reduced by its contractual obligations to its general contractors. Consequently, if CDC is to stay within budget on construction projects, it is important for it to minimize the number of PCOs caused by AE errors and omissions and by lack of adequate review.

9. CDC may be paying too much attention to project schedule and not enough attention to project costs. According to all the non-CDC personnel and many CDC staff we interviewed, schedule was the driving force on all projects. This heavy emphasis on schedule causes us some concern. Although project schedules are extremely important in light of the shortage of housing space for existing and projected inmates, excessive attention to schedule can lead to excessive construction costs. An example of this can be seen in the number of construction bulletins[64] issued for the Pleasant Valley prison project. The total number of bulletins issued for the project was 152. Of that amount, 11 bulletins were issued within one month of the Notice to Proceed being issued to the general contractor, and 41 were issued within three months of the Notice to Proceed being issued. This suggests to us that the construction drawings and specifications were issued before they were complete. Because each bulletin results in one or, more often, several PCOs, this haste to begin construction can lead to higher project costs than necessary. In the case of Pleasant Valley, PCOs added more than 8.6 percent to the costs of construction.[65]

   CDC contends that its emphasis on schedule results in lower overall construction costs because the State is able to avoid unnecessary inflation adjustments. While there is some merit in CDC's position, it is not clear to us that State costs are reduced when the rush to begin and finish construction of a prison results in additional change orders. We believe that a better balance between the competing priorities of project schedule and project costs is needed.

10. Some PCOs may be a direct result of CDC's scheduling several prison projects to run concurrently. Because of the tight time frames CDC sets for itself in constructing prisons,

[64] Construction bulletins are amendments to the construction documents (architectural and engineering drawings and specifications) that are issued after a contract has been awarded to the general contractor.

[65] This figure excludes the PCOs for Bid Package 1/6, which includes the site grading phase of the project. That phase experienced many problems, including a 17 percent cost overrun, that were attributable to miscalculations by the engineer of record, not to hasty issuance of the construction documents. CDC recovered some of the cost overruns from the AE firm.

it frequently is unable to incorporate lessons learned from one project into the design documents of subsequent projects until after the contracts for those projects have been awarded. We were told by several non-CDC personnel that some contractors who are aware of the errors in the design documents take advantage of that knowledge to under-bid the latest RFP and make their profits on PCOs. CDC states that it has been forced to schedule prison projects to run concurrently and to adopt tight time frames for its projects because of the reluctance by the Legislature to appropriate funds for new prison construction in time to accommodate the growing inmate population.

11. Several PCOs were caused by actions of other agencies. For example, at High Desert there were several change orders that were caused by additional requirements imposed by the Department of Water Resources' Division of Safety of Dams. The total cost of the change orders was $1.1 million. At Pleasant Valley, there were gas substation site changes due to PG&E requirements. Total cost: $55,699. At North Kern, the design engineer did not receive the customer service requirement package from the utility company until after the contract was awarded. As a result, the design had to be changed. The cost of the change order was $69,465; the cost of the additional design work is unknown. At Calipatria, the contractor was required to manufacture potable water from irrigation water because the water utility was delayed in providing potable water. Total cost: $162,500.

    These situations may reflect a need to elevate the interfaces between CDC and some agencies to higher management levels both within CDC and within the respective agencies with which CDC must coordinate its construction activities.

12. Some non-CDC personnel indicated that CDC is having continuing problems with change orders for its central kitchen and its control room. This seemed to be confirmed by comments made by CDC staff and by our review of change orders for seven projects. We were informed that these two construction activities invariably set the critical path for a project. This may suggest a need for another approach to dealing with these areas. CDC believes it has addressed those problems with its two most recent prisons (Salinas Valley and Corcoran II, which is currently under construction).

13. Construction Managers may not be doing an adequate job of holding down the cost of PCOs. We observed many PCO files that contained inadequate records of negotiation between the Construction Manager and the contractor. In other words, documentation of the basis for the agreed-upon price was lacking. Frequently, both the contractor's proposed price and the approved price were substantially greater than the "State's Estimate," with little rationale for the difference. We spoke to the Principal Construction Engineer about this and were informed that PCOs often are under consideration by the Project Director, the Construction Manager, the DSA inspector and the CDC engineer assigned to the project long before the PCO documentation is forwarded to Sacramento. Because all parties are fully aware of what a PCO is likely to cost by the time the

documentation is submitted to Sacramento, the Principal Construction Engineer often is able to determine the appropriateness of the proposed expenditures without benefit of the documentation that we believe is warranted. We also were informed by the Principal Construction Engineer that once he becomes comfortable with the work of a specific Construction Manager and can trust that Construction Manager to do a good job of negotiating PCOs with contractors, documentation becomes a less important factor in his decision to recommend approval of the PCO.

If one assumes, as we do, that better documentation has a price, either in terms of schedule or administrative costs, this may be a reasonable approach to managing the Planning and Construction Division's workload. Nevertheless, it causes us several concerns: (1) it creates an informal and subjective process that is likely to be administered in widely varying ways by different staff; (2) for PCOs that result from errors and omissions, any overstatement of the cost of correcting the errors or omissions may be grounds for the AE to protest the State's efforts to recover State expenditures related to those PCOs; and (3) if the Construction Manager is doing an inadequate job of negotiation, the State is paying more than it should for constructing prisons, and the State may not be recovering enough from AEs for errors and omissions (see below). We believe that CDC should expect the Construction Manager to do a good job of estimating PCO costs and a better job of documenting those estimates because the Construction Manager's contract with the State requires it.

14. In general, CDC seems to have enforced its policy of holding AEs liable for the cost of errors and omissions when those costs exceed three percent of the contract award value of the relevant bid packages. Since implementing the errors and omissions process in late 1989, CDC has recovered $672,000 from AEs to offset costs incurred by the State due to design errors and omissions.

    On the other hand, this means that CDC has allowed at least $3 million of costs attributed to errors and omissions to go unchallenged. CDC indicated that, to recover more than it did, it would have been forced to sue the AEs and prove negligence, something it regards as difficult to do. Planning and Construction Division management stated that when it made the decision not to pursue the unchallenged errors and omissions, CDC's attorneys advised the Division that the cost of litigation would most likely exceed the amount that CDC would recover.

    Although we believe there is some value to avoiding litigation on these matters, which is likely to consume more funds than can be recovered, establishing a standard of three percent as an acceptable level of error sends the wrong message to AE firms. It was evident in our discussions with AE firms and from the correspondence between AE firms and CDC regarding errors and omissions that the AE firms are aware of CDC's standard. In one case, the AE firm even used it as a negotiating ploy in dealing with CDC on the firm's errors and omissions on a specific project.

Furthermore, in computing the fiscal impact of errors and omissions on State expenditures, except in cases where work must be completely redone, CDC assumes that the State fiscal impact is equal to 15 percent of the value of the approved PCO amount, excluding the contractor's allowable profit factor. This assumption is based on CDC's view that, had the work performed under the PCO been included in the contractor's original bid amount, the profit margin would have been much less. What this assumption ignores, however, is that the prices paid by the contractor to his suppliers and his subcontractors also are likely to be much higher if the work must be completed on short notice. In reality, the contractor has no incentive to shop for the best price for labor and materials in completing PCO work because he knows the State will pay his expenses and add a profit margin of 16 to 20 percent. Consequently, CDC's methodology may produce a low estimate of the actual fiscal impact to the State. This problem is compounded if the Construction Manager is doing an inadequate job of negotiating the lowest PCO prices on the State's behalf.

15. We reviewed the negotiation records for several AE firms and found that the Program Manager provides a valuable service in negotiating the hours and rates with the AEs. This is consistent with our finding that, for recent projects we reviewed, the Program Manager seemed to do a good job of forecasting bid awards for the various bid packages.

16. Although CDC staff and consultants appear to be working diligently to produce a quality product at a reasonable cost to the State, there may be inadequate accountability in the construction management process. The contracts with the Program Manager and the Construction Manager do not contain performance criteria, and CDC never formally evaluates the performance of either consultant. In addition, CDC formally evaluates AE firms only through its process of dealing with design errors and omissions. And despite a design bulletin requiring the Program Manager to perform a general evaluation of the AE firm after a project is complete, formal AE evaluations have never been submitted by the Program Manager. Informal mechanisms exist for evaluating all three consultants, but, given the number of design errors and omissions and the sketchy PCO documentation, they may be inadequate.

RECOMMENDATIONS

1. Because it is evident that they need to be revised, **we recommend that CDC immediately begin the process of revising the SDDs and accompanying specifications . We also recommend that CDC and the Program Manager explore ways of either simplifying the SDDs to allow them to be updated on a more timely basis or staggering prison construction projects to allow enough time for the SDDs to be modified to correct errors discovered during projects in which construction is underway. We also recommend that CDC direct its Program Manager to submit both an estimate of the**

cost and amount of time needed to create a design library and a cost-benefit analysis of using a design library to design future prisons. We also recommend that CDC submit the results of that cost-benefit analysis to the Youth and Adult Correctional Agency and the Department of Finance so the Administration can determine whether a Budget Change Proposal to request funding for a design library would be appropriate.

2. **We recommend that CDC management take steps to ensure that its staff does a thorough job of reviewing designs and specifications before they are issued with the bid packages.**

3. **We recommend that CDC take a firmer stand on the AE's errors and omissions to make it clear that it desires error-free design drawings and specifications when the construction documents are issued as part of the bid packages. We also recommend that CDC adopt an alternative approach to dealing with its AE partners that places a greater emphasis on design quality and that it institute an AE evaluation process in which design errors are given a high weight in the evaluation.**

4. **We recommend that CDC direct the Program Manager to review several samples of PCOs caused by errors and omissions to validate the method being used to compute the State costs associated with errors and omissions. In particular, the validation study should evaluate not only the contractor's markup but also determine the estimated value of the materials, supplies and labor for the work had it been included within the original bid package. If the validation study concludes that a different percentage should be used than is presently used to calculate the State's costs associated with errors and omissions, CDC should revise its methodology accordingly.**

5. **We recommend that CDC make it clear to Construction Managers that their job is to minimize the cost of PCOs to the State by negotiating competitive prices for labor and materials with contractors.** Because we recognize that if this recommendation is adopted, additional time may be spent negotiating prices, and because we wish to avoid excessive negotiation time, which would lead to project delays, **we recommend that the extent of the required negotiation be tailored to the value of the PCOs. We also recommend that CDC require Construction Managers to provide adequate documentation of their PCO recommendations and that CDC conduct formal evaluations of Construction Managers, using the Construction Manager's ability to negotiate competitive prices as one of the evaluation criteria.**

6. **We recommend that CDC management examine the area of coordination with other agencies to determine what, if anything, can be done to minimize PCOs and schedule delays in the future.**

7. Because we believe a five percent contingency is more than enough to address unanticipated events that arise during construction of CDC's prototype buildings, and because we believe CDC can significantly reduce PCOs by updating its SDDs and improving its design review process, **we recommend a reduction in the amount allocated for contingencies for prison construction projects . In particular, we recommend a reduction from 5 percent to 2.5 percent for the Bid Packages 3, 4, 5, 7, 8, 9, 10 and 11.** These bid packages have standard design documents or involve buildings that CDC has constructed on many different projects. By now, the errors should have been worked out of the designs and a lower contingency amount should be required. On the other hand, because Bid Packages 1, 2 and 6 often involve unpredictable site conditions, they should continue to receive a contingency allocation of 5 percent. We estimate a savings of approximately $3.5 million per project if this recommendation is adopted.

CHAPTER 7
DESIGN-BUILD:
AN ALTERNATIVE CONSTRUCTION APPROACH

INTRODUCTION

As noted in Chapter 6, the traditional approach to construction management is to hire an architect and engineer to design the facility and, once the design has been completed, issue bid documents seeking bids for the construction of the facility. An alternative to this traditional "design-bid-build" method of construction is the "design-build" method. Under the design-build approach, the owner hires a single firm to both design and construct the facility.

Proponents of design-build cite the following as advantages of this process over the traditional design-bid-build approach to construction projects:

1. Reduction in project delivery time due to (1) a reduction in the number of procurements, (2) the ability of the design-builder to begin construction before the designs are complete, and (3) faster resolution of issues that surface during the construction phase.

2. Reduction in project costs due to the savings achieved through value-engineering and reducing the project's delivery time and administrative expenses.

3. Reduction in project risk to the owner by reducing arguments over responsibility for errors and omissions, faulty performance, and coordination problems; shifting more of the responsibility for timely delivery to the builder; and reducing the owner's liability stemming from design and construction deficiencies.

4. Delivery of a better quality facility, which usually is attributed to value-engineering.

Some, but not all, proponents also believe design-build significantly reduces the number of change orders associated with construction projects due to the close working relationship between the members of the design-build team. Theoretically, a process that relies upon ongoing, collaborative decision-making by the AE, the project manager and the general contractor, all of whom are employed or hired by the design-builder, should have fewer disputes than one that involves several independent decision-makers. However, some proponents caution that there still is room for misunderstandings between the owner and the

builder, a source of many change orders under the traditional design-bid-build construction process.

Opponents of design-build cite the following as disadvantages:

1. Loss of independence on the part of the architect and engineer, who no longer serve as technical advisors to, and have a fiduciary responsibility to, the owner.

2. Reduction in the owner's say in various design issues that occur during a project.

3. Increased project risk to the owner, due to the owner's not being as familiar with the design of the facility as under the traditional method. Opponents note that design and construction errors are likely to be caught later under design-build and therefore be more difficult and expensive to correct.

Opponents of design-build also are skeptical of the savings attributed to design-build by its proponents, claiming that any savings are offset by expenditures associated with the owner's need for increased oversight staff.

Some advocates of design-build favor an intermediate approach between the traditional construction method and the full design-build method. Under this approach, the prospective owner hires an AE firm to produce a partial design of the facility and then hires a design-builder to complete the design and build the facility. This approach is called "bridging." Most persons we contacted during our evaluation of design-build use this approach, although they differ in the percentage of the design they produce in-house before turning it over to the design-builder.

Although design-build has been used successfully by the private sector for several years, it has not yet gained widespread acceptance among government agencies. A small number of federal agencies, including the Department of Defense, the General Services Administration, the Veteran's Administration, and the U.S. Postal Service, have used it extensively. Several other federal agencies have used it to a minor degree. Public agencies in several states, including California, also have used design-build. Some states have even used design-build for prison construction. States that have built prisons using design-build include Texas, Massachusetts, Pennsylvania, Florida, and Virginia. The State of California has used design-build only to a limited extent. The Department of General Services used a form of design-build to construct two office buildings and is in the process of using it to build two more. The University of California also has used design-build for many of its facilities, including hospital laboratories.

CDC has been approached by several construction firms advocating the use of design-build as a way of reducing the State's cost of prison construction. Three of the firms provided CDC with estimates of the time savings that would be achieved using design-build, and one

produced an estimate of the cost savings that could realistically be achieved through the use of design-build. The schedule data provided by the firms suggest that CDC could save approximately four months in building its prisons if it were to use design build. Because inflation currently adds about $700,000 per month to the cost of a prison, this schedule savings, if realistic, would result in reduced construction costs of about $3 million per prison. According to information supplied by one of the firms, CDC also may expect to achieve significant savings in design and construction-management fees by using design-build.[66] CDC is skeptical of the schedule savings predicted by the firms. With the assistance of its Program Manager, CDC examined the time frames associated with various activities that must be performed during a construction project under both its existing method and design-build. Based on that analysis, CDC believes there would be little, if any, schedule savings associated with using design-build. CDC has done no formal analysis of the potential savings in fees associated with design-build.

FINDINGS

1. To determine whether the government agencies that have used design-build are satisfied with the results and have achieved the benefits attributed to design-build by its proponents, we contacted several of them. Among the ten users we contacted, there was a near-consensus that design-build resulted in facilities of the same or higher quality as are being constructed under the traditional approach and that design-build results in faster project delivery times. Several of the respondents said that, in addition to the inflation-related savings resulting from faster delivery times, they achieved some administrative and construction savings. However, those savings were modest. Whereas the respondents could point to data demonstrating faster delivery times, none was able to produce data that demonstrated the amount of savings achieved. Most users stressed that they had little expectation for design-build producing savings. Their main reason for using design-build was speedier project delivery. In the case of the correctional agencies we contacted, design-build was chosen because of the need to build prisons rapidly.

2. One state correctional agency in a medium-size state indicated that the agency encountered unsatisfactory results on two separate projects built by the same design-builder. Both projects (1,000 bed prisons) were delivered late and were 25 percent over budget. However, the same user said he had good results when design-build was used on several small projects. Another state correctional agency, in a medium-size state, indicated that it had only recently begun to use design-build. Its only design-build project was successful, but did not result in significant savings in time or expenditures. However, the respondent indicated that he believed that was due, in part, to the agency's

[66] It should be noted that the firms, which perform construction-management and general-contract work, also have a vested interest in the State's using design-build: they would stand to gain some of the business CDC now conducts with AE firms, the Program Manager, and DSA.

unfamiliarity with the design-build process. The agency will soon begin construction on its second design-build project.

3. Because CDC's analysis comparing the construction schedule of its existing construction process with that of design build was produced only recently, we did not have time to evaluate CDC's assessment that there would be no schedule savings associated with using design-build. However, in our opinion, some of the fee savings estimated by the firms that discussed design-build with CDC may be realistic. In constructing its last nine prisons, CDC has spent an average of $24.2 million per project (16 percent of the projects' construction costs) on AE, Program Manager, Construction Manager, and DSA fees.[67] (See Appendix H.) Based on our conversations with prison construction staff of other states, the percentage spent by CDC on fees is somewhat high.[68] By using design-build, CDC should be able to reduce its expenditures for its Program Manager, some of whose quality-assurance responsibilities would be assumed by the design-builder. Furthermore, it is possible that some savings would be realized by CDC's not having to hire either an AE firm to site-adapt its standard design documents and to provide construction support or a consultant to coordinate the work of several prime contractors. These responsibilities would continue to be performed, but by the design-builder, which would use its own AE firm and project manager, who are likely to be professionals with whom the design-builder has worked regularly. CDC would continue to use its own consultants for program management and some design activities, if only to maintain the Department's standard design documents. CDC also would continue to need someone to monitor the work of the design-builder, although it is likely that an independent construction management firm would be best suited for that task.

4. Other administrative savings also are likely to result from the use of design-build. These savings are likely to occur due to reductions in workload for project management and contract administration. Since coordination among the AE firm, the project manager and the prime contractors would be the responsibility of the design-builder, a significant amount of CDC's project management workload would be transferred to the design-builder. CDC would continue to perform some of it current activities, but a reassessment

[67] Miscellaneous fees (primarily special engineering fees) and CDC's administrative expenses are excluded from this amount. Miscellaneous fees for the last nine prisons have averaged $1.7 million, about 1.1 percent of the projects' construction costs. We estimate that CDC's administrative expenses add about 2 percent ($5.6 million) to the cost of constructing prisons. We should also note that with the Corcoran II prison CDC has reduced its budgeted level for onsite AE fees from 7 percent to 5 percent of the project's construction costs. If CDC is able to stay within its budget for AE fees on Corcoran II and subsequent projects, it is likely that its overall fees on future projects will fall from 17 percent to 15 percent of the projects' construction costs.

[68] A thorough comparison of CDC's construction fees with those of other states was not possible in the time frame established for our study because of the difficulty of obtaining comparable data from other states. In some cases, we found that complete fee data was not tracked by the state's correctional agency because another state agency performed the work, or contracted for the work to be performed. In other cases, staff within the agency performed the work and the agency had no ready means of separating program management, architectural, engineering, construction management, and inspection activities from other agency activities. In no case did any of the five agencies with whom we spoke use a consultant as a program manager.

of its responsibilities clearly would be needed if CDC were to use a design-build approach to build prisons.

5. In the area of contract administration, we believe that design-build would produce significant savings associated with the reduction in the number of bid packages. Currently, CDC issues at least 9 RFPs for each new prison project, and administers at least 9 construction contracts. Under a design-build approach, the number of bid packages would be reduced to one, greatly reducing the amount of time spent preparing and evaluating RFPs and administering contracts. Furthermore, if design-build is successful in reducing the number of change orders, as some proponents of design-build believe it would be, there is likely to be a significant savings in State and consultant staff required to process the paperwork associated with change orders and proposed change orders. CDC currently has 38 positions in its Contract Procurement - Cost Control Unit, some of whom spend a substantial amount of their time administering contracts, processing paperwork associated with proposed and final change orders, and tracking "contingency," i.e., proposed change order, expenditures. CDC indicated that about 4.5 positions are assigned to these activities. However, the Planning and Construction Division does not maintain detailed workload information. Lacking this workload information, we cannot calculate the exact amount of administrative savings that can be achieved through the use of design build. However, we believe it is reasonable to assume that 10 percent to 20 percent of the 38 positions could be eliminated if CDC were to use design-build for <u>all</u> its construction projects. In addition, we believe there would be a reduction in Construction Management expenditures equivalent to the salary and benefits of at least one full-time position based solely on reduced change order workload.

6. Despite the potential administrative savings offered by design-build, there are several issues that must be addressed before the State begins using design-build for prison construction. First, and most important, State law must be changed to authorize CDC to use design-build. Under California's Public Contract Code, pre-qualification of bidders for public works contracts is not authorized except for a limited number of office construction projects that have recently been authorized and for construction projects under the control of the University of California. Otherwise, all public works contracts must be competitively bid. Most of the public agency users of design-build that we contacted indicated that one of the reasons they have been successful using design-build is that they were able to pre-qualify bidders before putting their projects out to bid.

   Second, construction professionals with whom we discussed design-build recommend completing all site selection and environmental impact reports and environmental mitigation before authorizing the design-builder to begin work on the project. Because the primary advantage of design-build is the reduction in project delivery time, project delays caused by difficulties in selecting sites and obtaining approved environmental impact reports are likely to eliminate, or at least greatly reduce, the benefits from using design-build. Therefore, CDC staff should continue to be used to select sites and obtain

environmental clearances for new prison projects, and these activities should be nearly complete before a design-builder begins work on a specific project.

Third, to achieve the benefits of design-build, the owner must be willing to be less involved in the day-to-day decisions on construction and, to some extent, design modifications. Based on our detailed review of seven prison construction projects, it is clear that numerous design changes are made by CDC staff, in particular program and security staff, and by management during the construction phase of the project. As noted in Chapter 6, many of the changes seem to occur because CDC staff do not adequately review the plans and specifications during the design and pre-design phases of the project. Other changes are made because of what is learned during other projects underway or recently completed. Changes of this nature during the construction phase are likely to result in very expensive change orders.

Fourth, because of the wide variation in types of prisons being built across the country, the use of a pure design-build approach may not produce prisons that satisfy CDC's security needs. Consequently, we believe CDC should continue using its SDDs, at least initially. Under this bridging approach to design-build, the design-builder would be responsible for site-adapting CDC's designs and for adding mechanical and electrical systems that CDC chooses to leave under the design-builder's control, but for the most part CDC's designs and plans would be used for constructing its prisons. However, in light of our findings in Chapter 6, CDC's standard design documents and specifications require a substantial number of corrections and modifications to make them complete. If the SDDs and specifications were submitted to a design-builder in their present state, we believe the design-builder would require additional time to correct and modify the designs and specifications before construction could begin or would require additional funds through change orders to correct the design and specification problems that currently exist. In either case, it is likely that the full benefits of using design-build would not be achieved.

RECOMMENDATIONS

We believe design-build offers several advantages over the construction management process currently used by CDC, in particular the prospect of lower administrative and support costs, fewer design errors and fewer change orders. Therefore, **we recommend the Legislature amend existing law to authorize CDC to pre-qualify potential bidders for the purpose of implementing design-build on at least one of its currently planned prison construction projects**. This could be done on a project-by-project basis, or CDC could be given a blanket authorization to use design-build, similar to that authorized for the University of California in Section 10503 of the Public Contract Code.

We also recommend that, if the Legislature authorizes it to do so, CDC use design-build for several future prison construction projects. In preliminary discussions between CDC

management and legislative staff, CDC has agreed to use the design-build approach on one project as a test of its viability, provided legislation is enacted authorizing CDC to use a request for qualifications process to select a design-builder. Because of the number of contingencies that can affect the outcome of an individual construction project, we believe the use of design-build on one project may provide an inadequate test of viability of design-build for constructing prisons in California. Therefore, **we recommend that any test of design-build include at least two, and possibly three, of CDC's next eight to ten construction projects**. However, because design-build is a new approach for CDC, there may need to be an adjustment period in which CDC obtains outside assistance in setting up a process for managing a design-build project. Depending on the length of that adjustment period, design-build may not be appropriate for projects that currently are ready to proceed into design.

APPENDIX A

INSTITUTIONAL VACANCIES AND COVERAGE
1993 - 1995

This appendix contains charts for all institutions showing their number of vacant positions, and their use of overtime, sick leave and Academy graduates, separated into those being hired as Permanent Intermittent Employees (PIEs) and those hired directly from the Academy as full time employees.

Sick leave data were gathered from the institutions and are not consistently reported. Some institutions aggregated the sick leave of correctional officers, sergeants and lieutenants. Some reported only sick leave for the employee; others included family sick leave, and some other institutions included bereavement leave. As a consequence, the information is not comparable across institutions.

The major benefit of these line graphs is to view the relationships among the five sets of factors, and how they vary in combination with each other.

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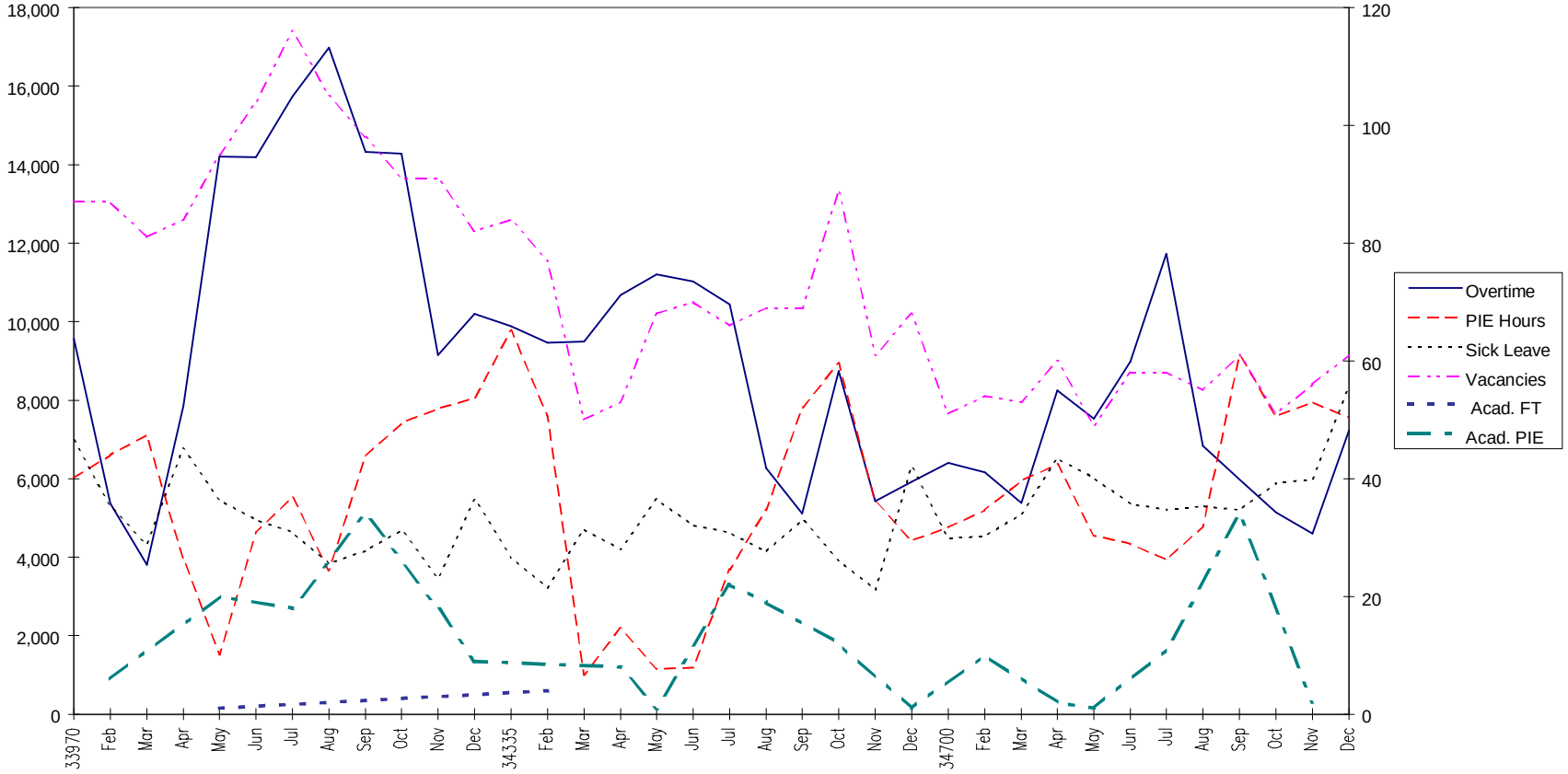
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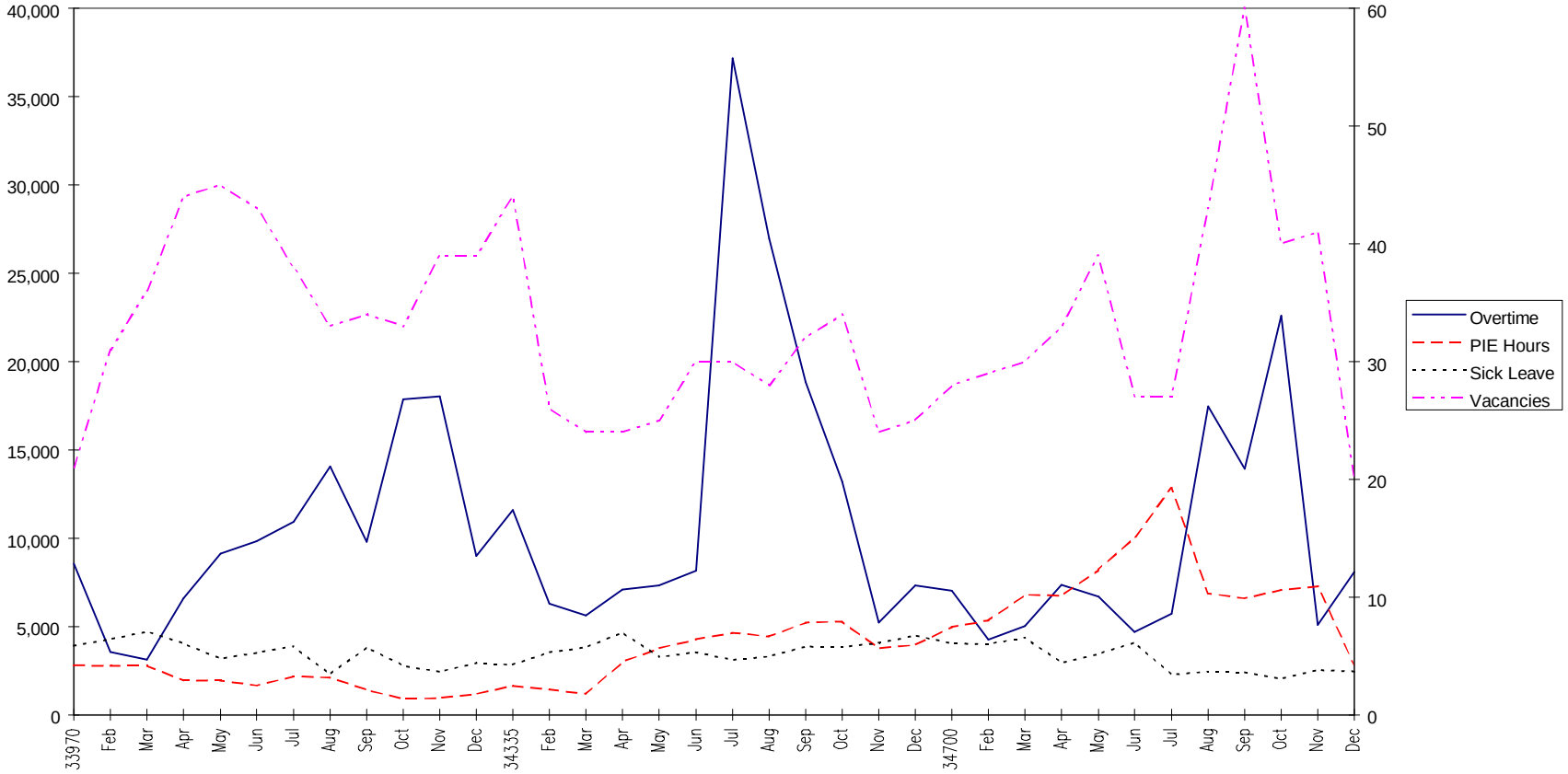
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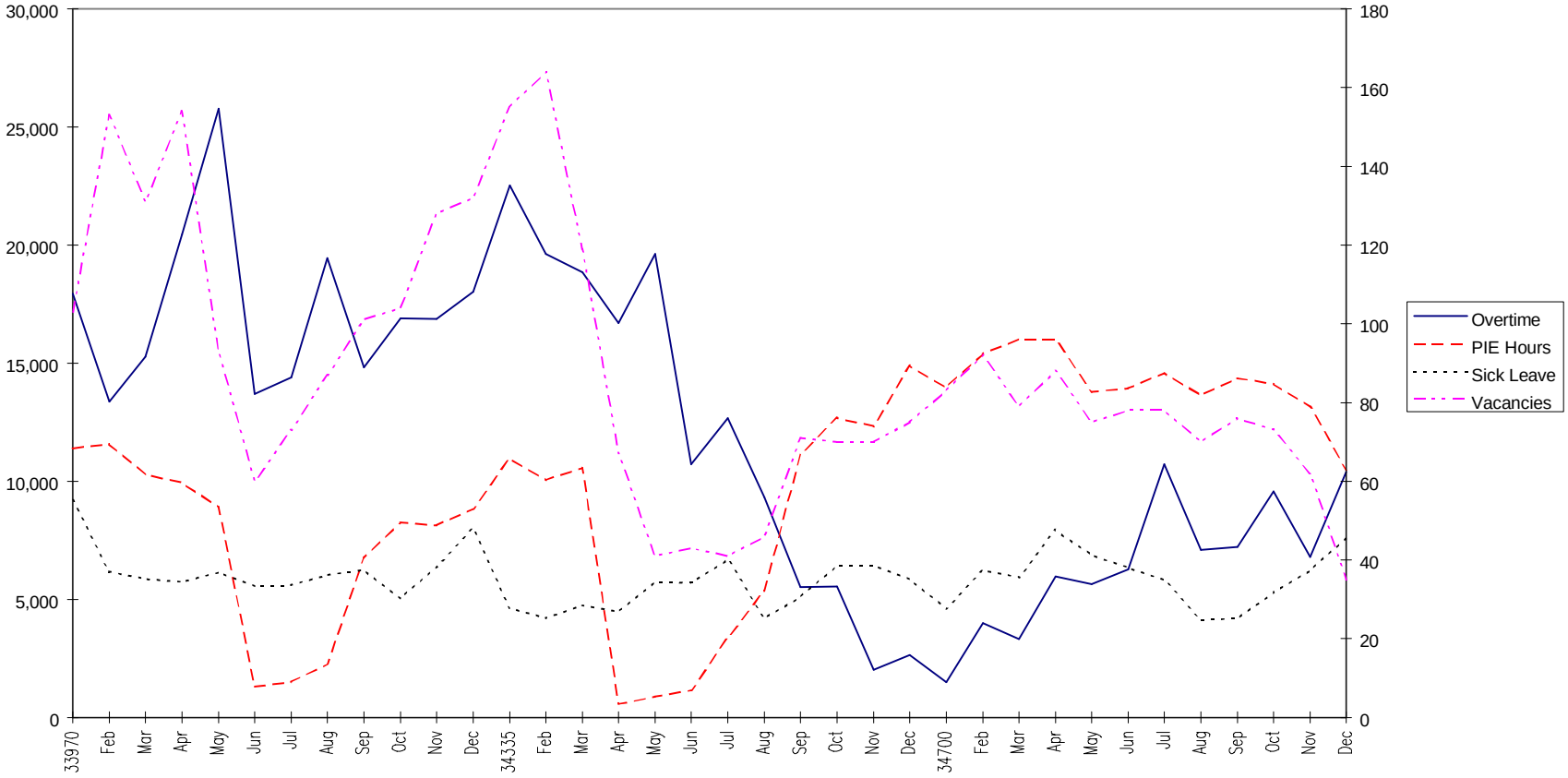
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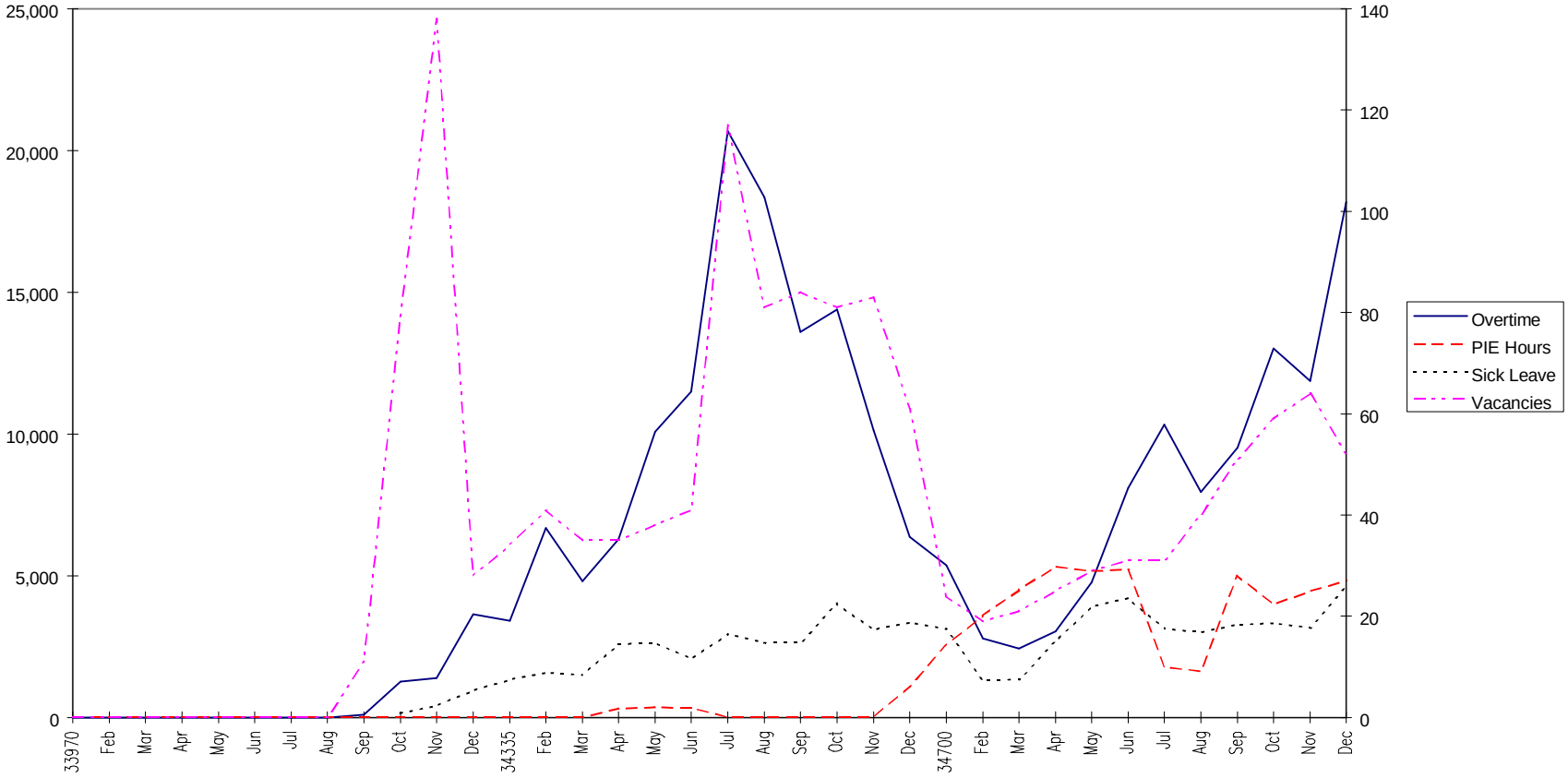
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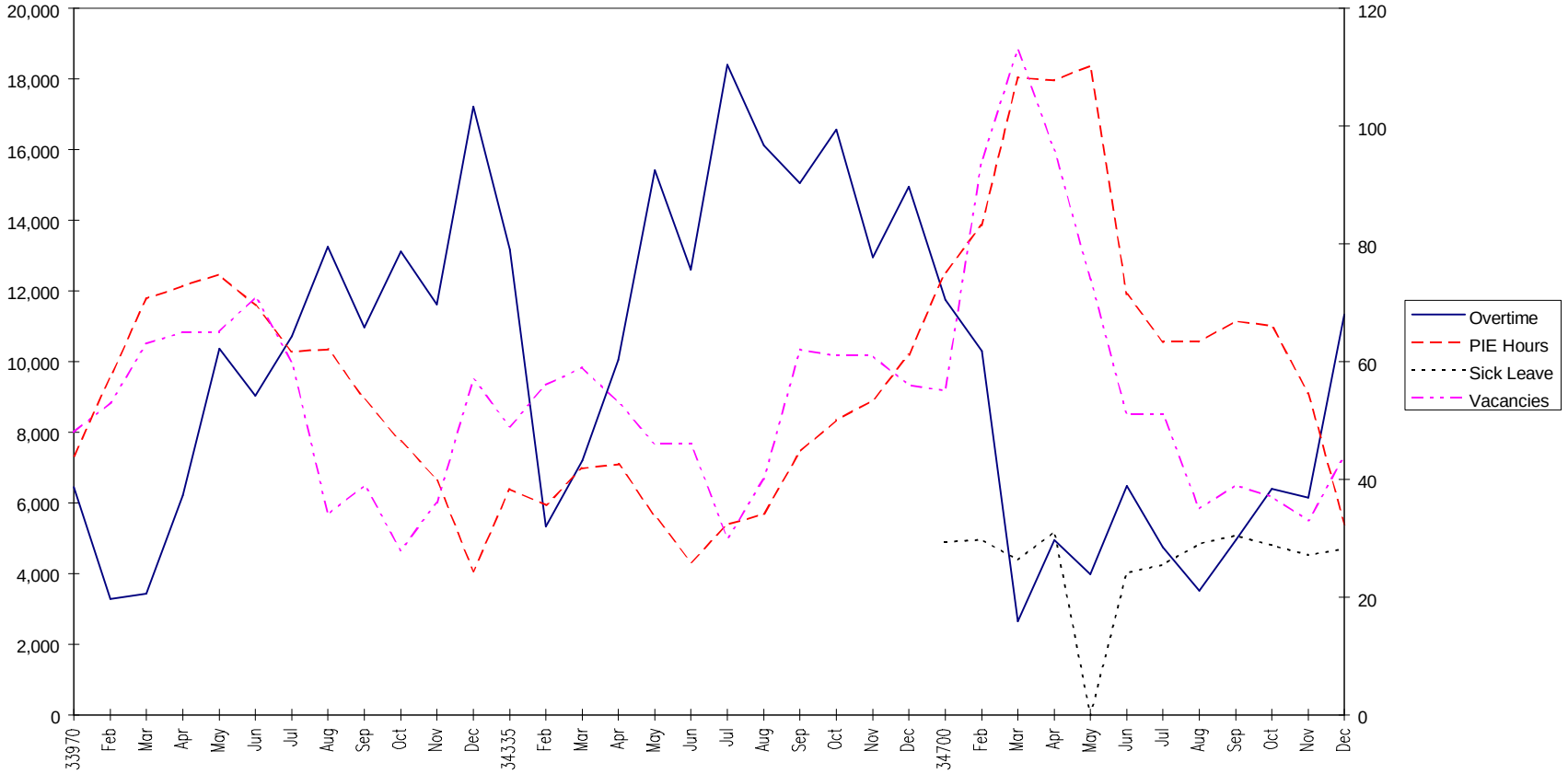
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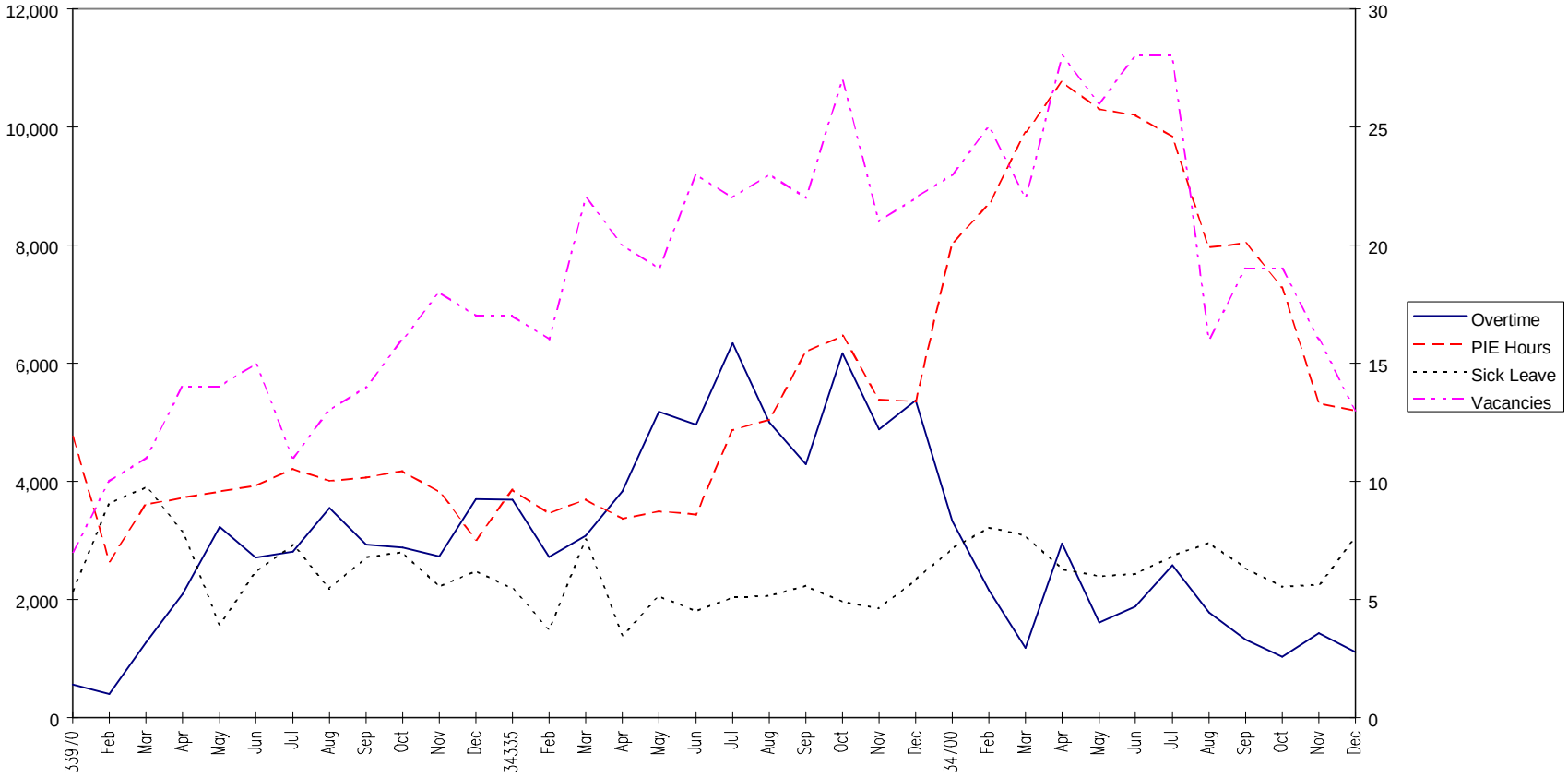
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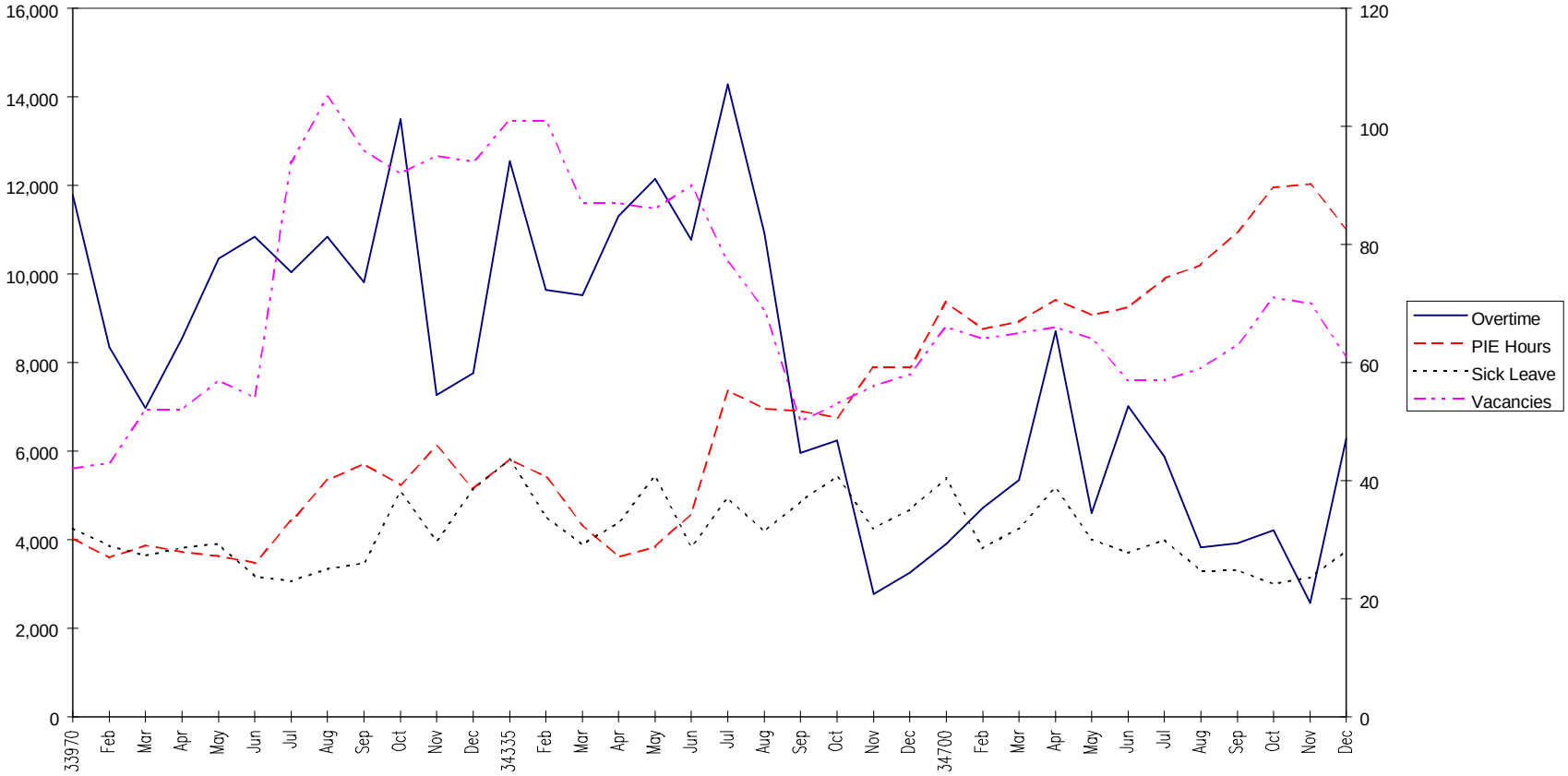
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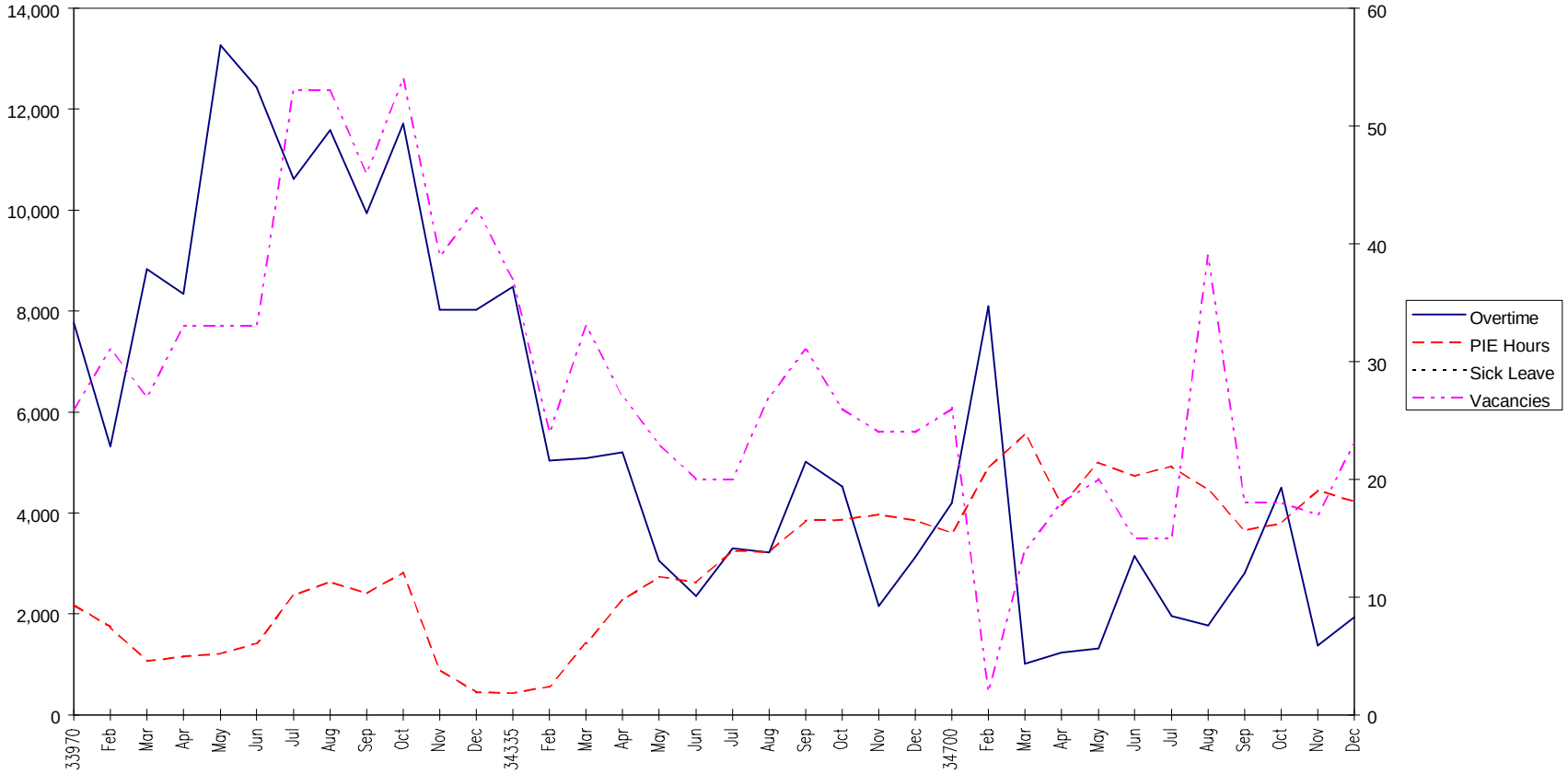
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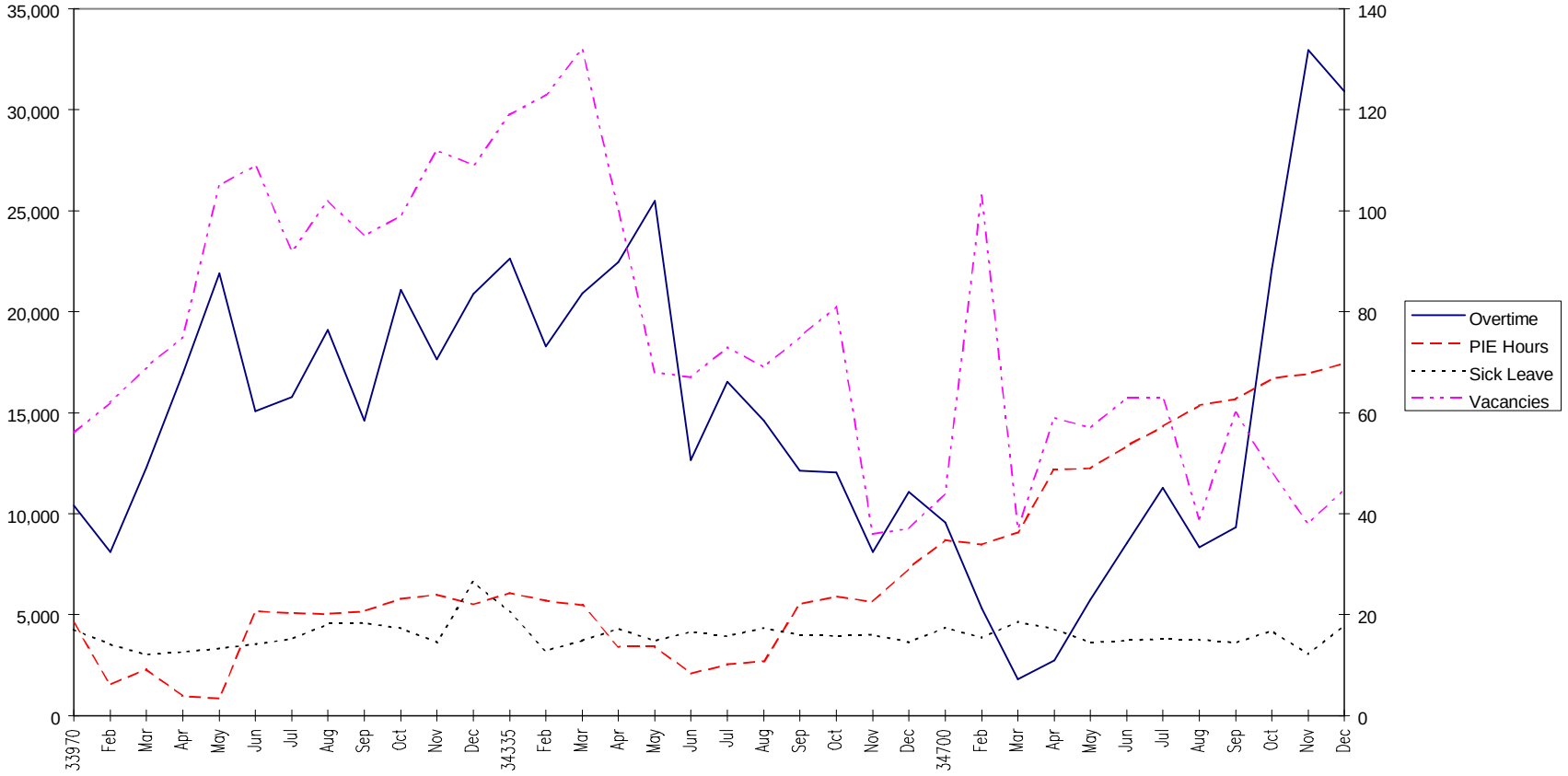
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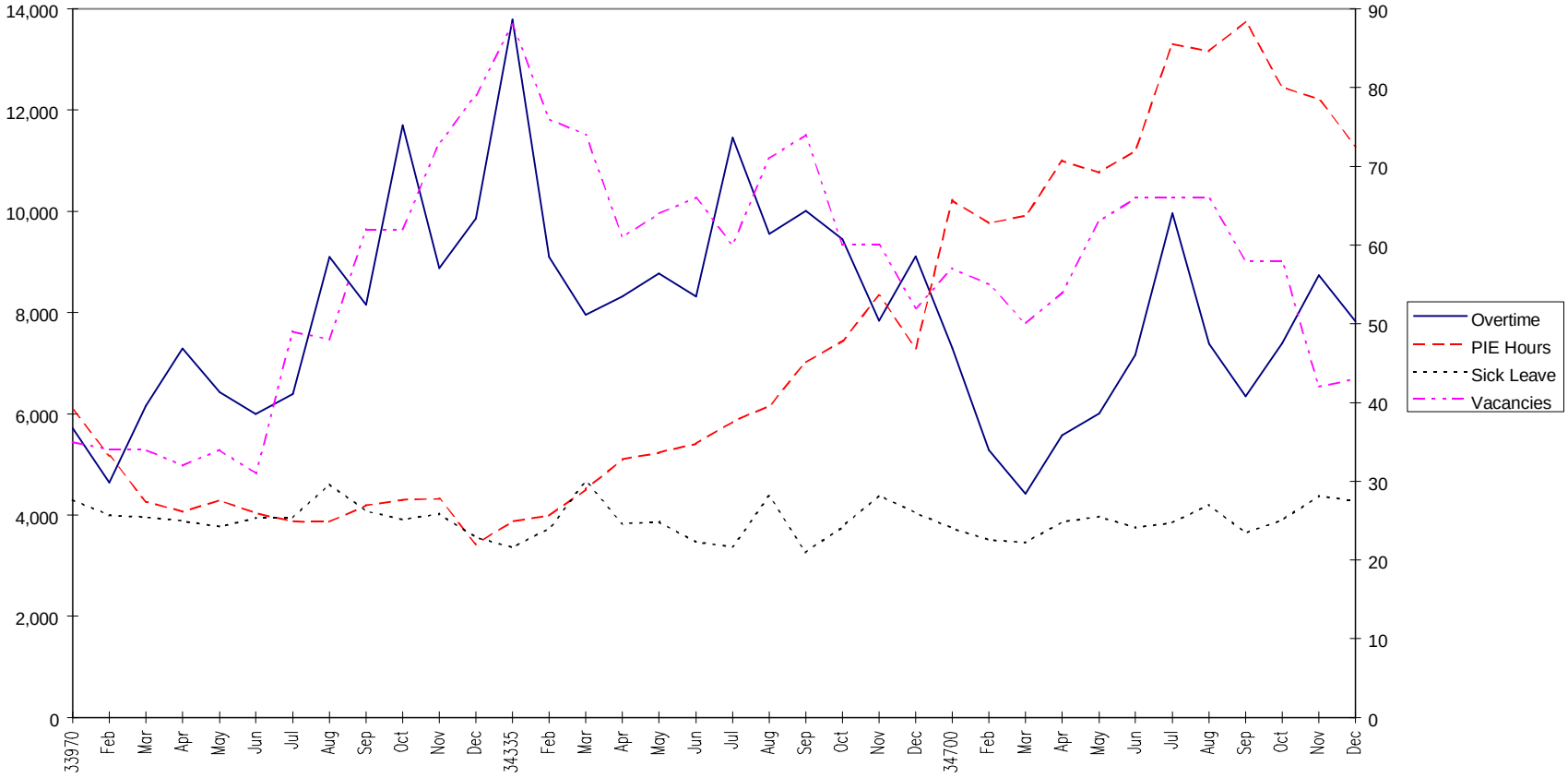
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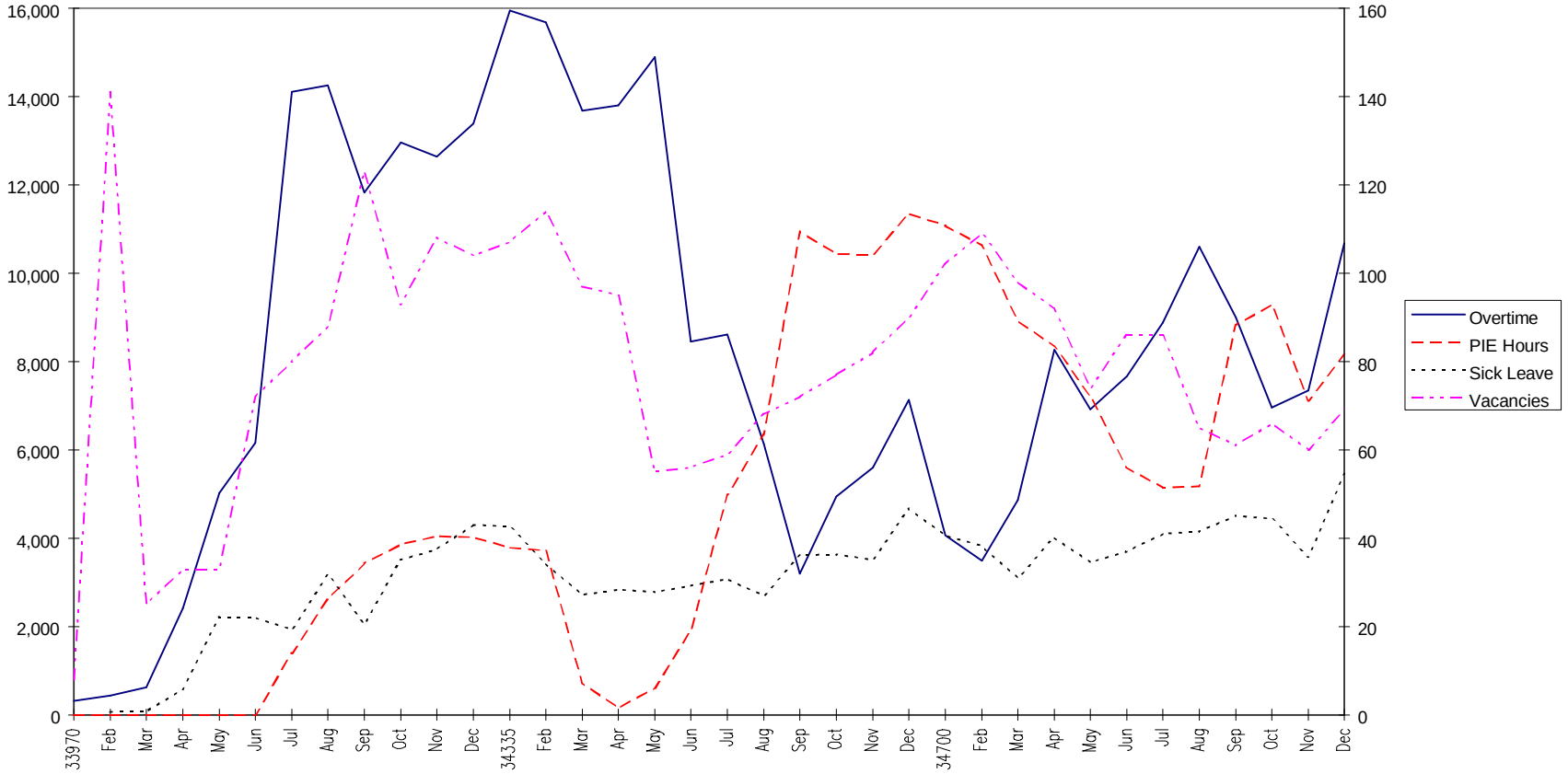

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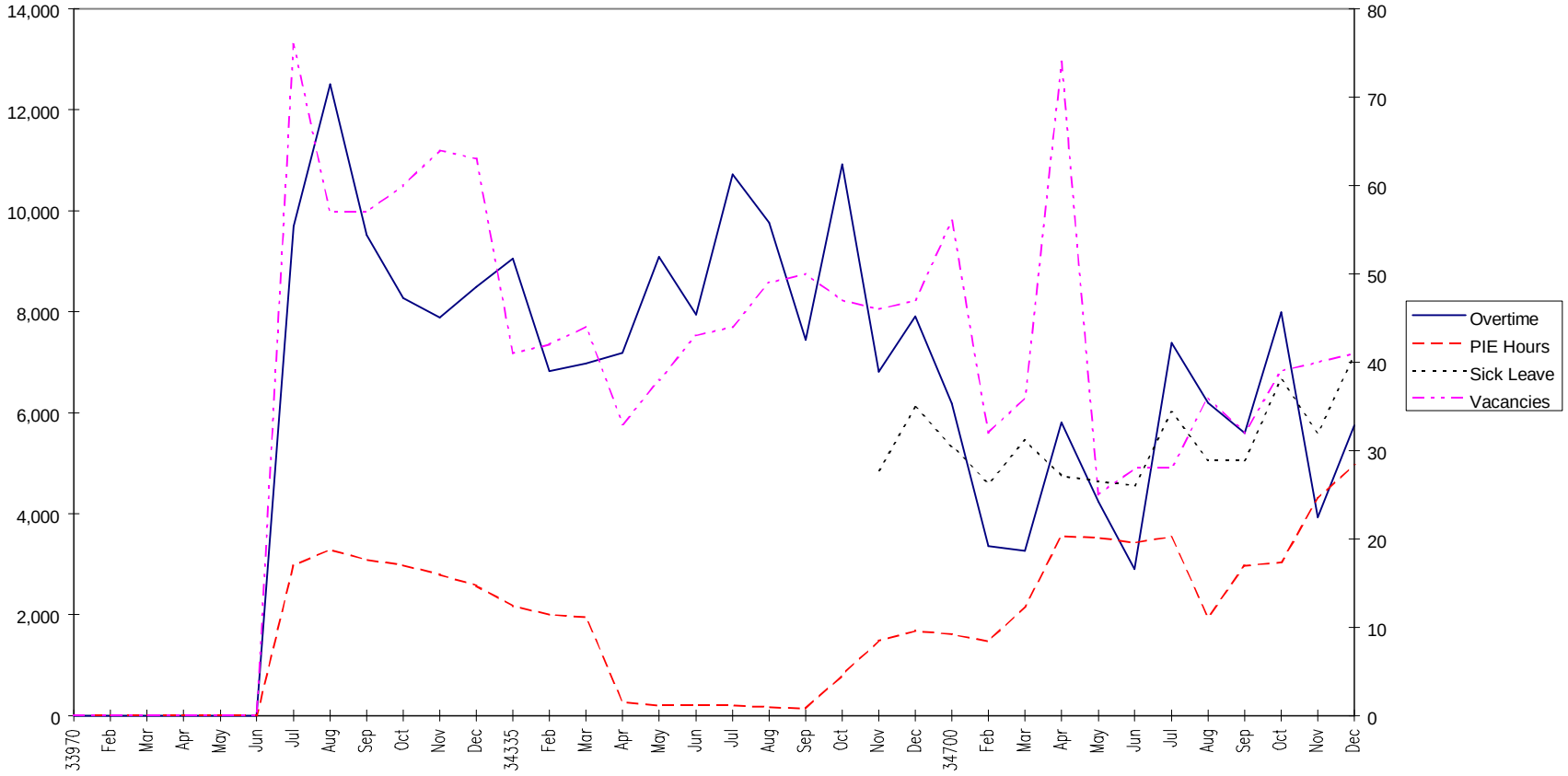

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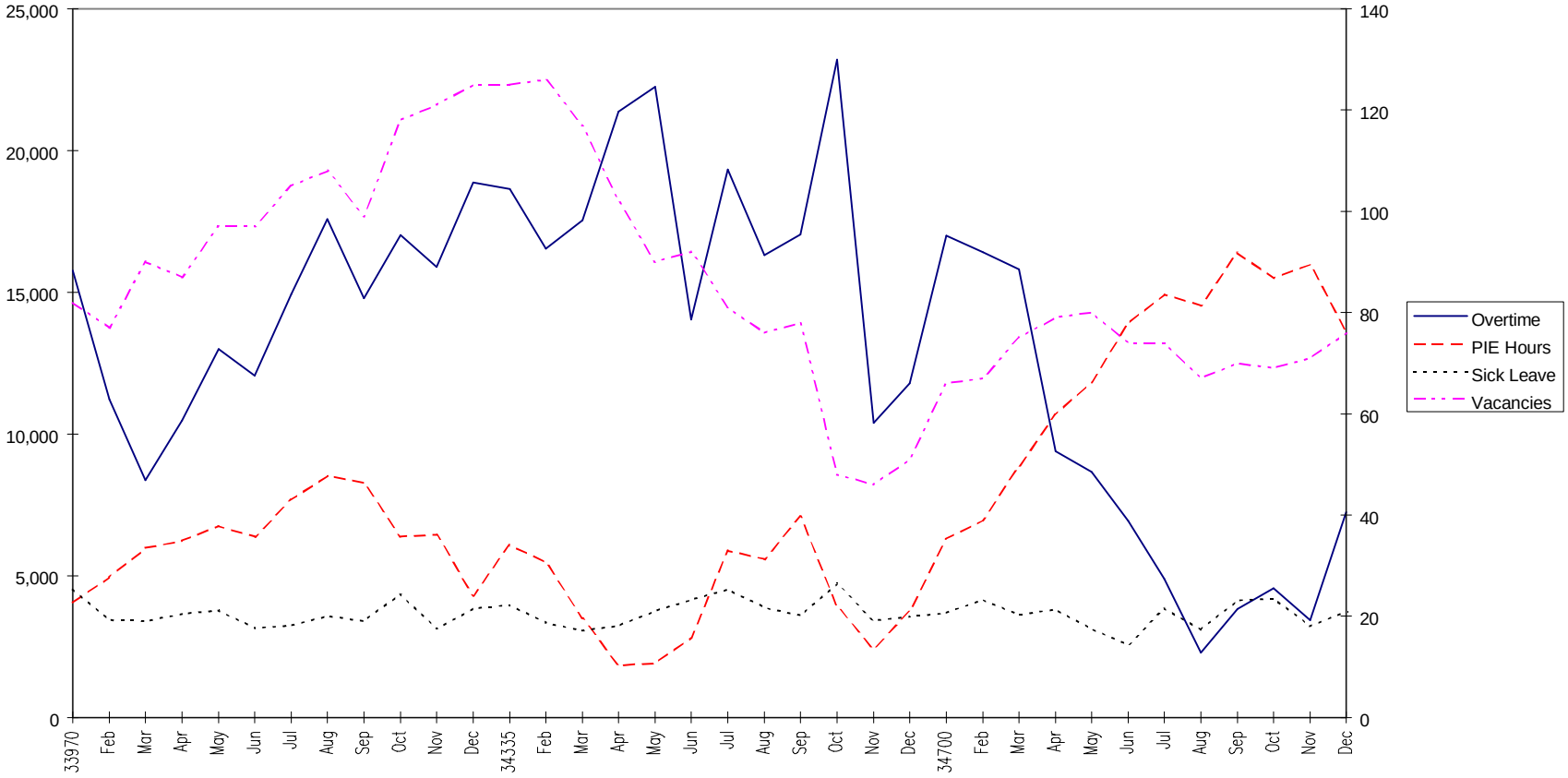
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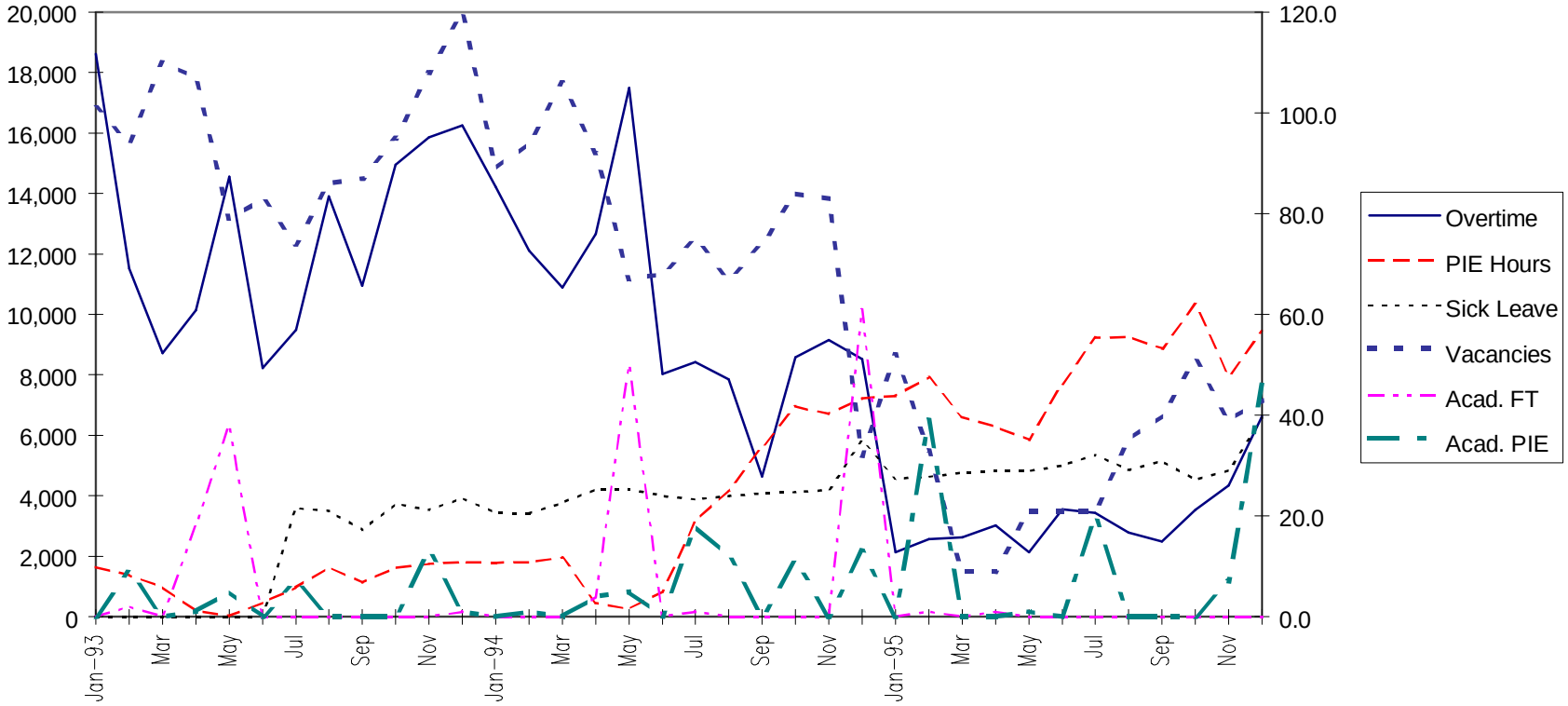
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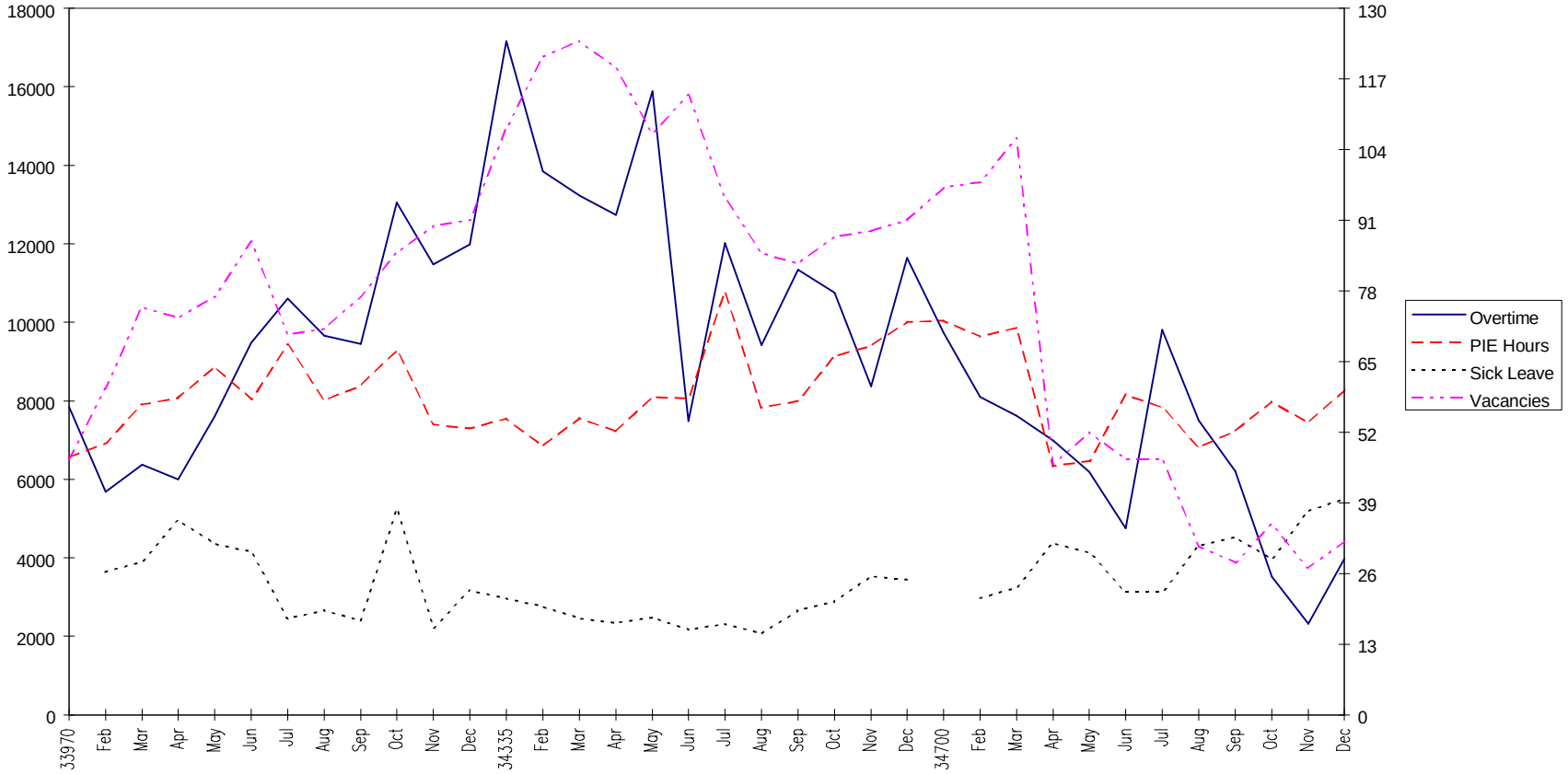
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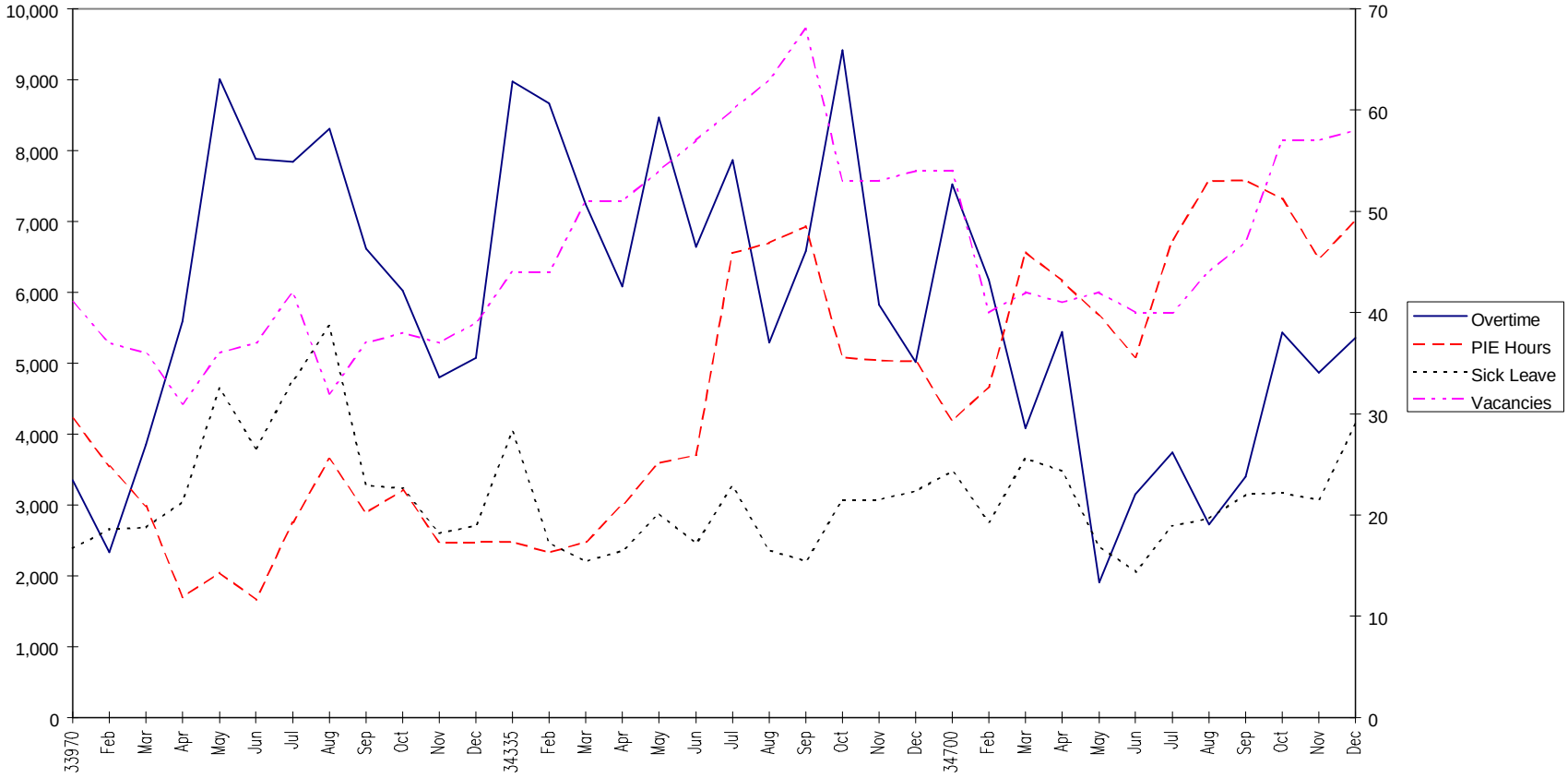
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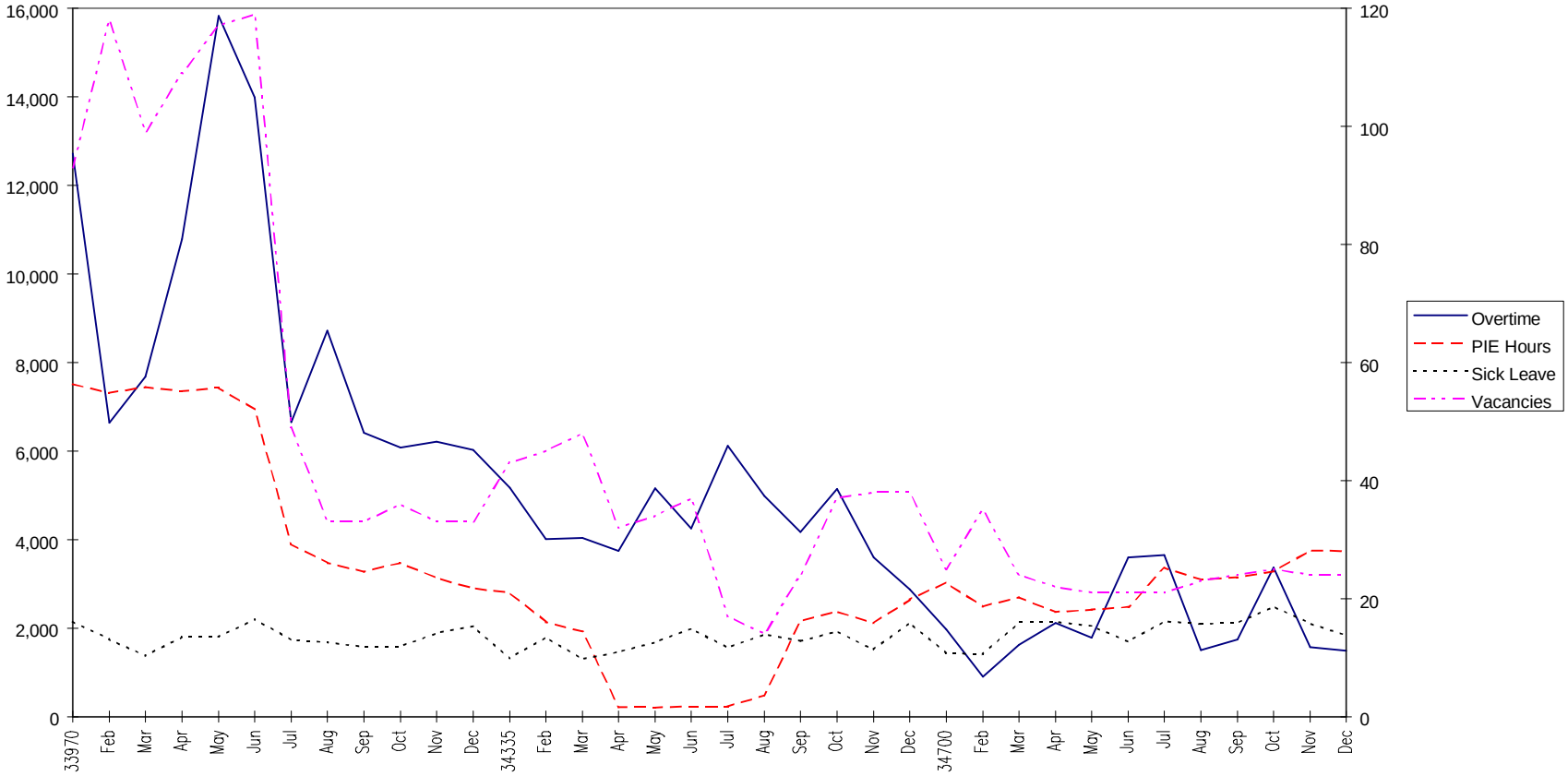
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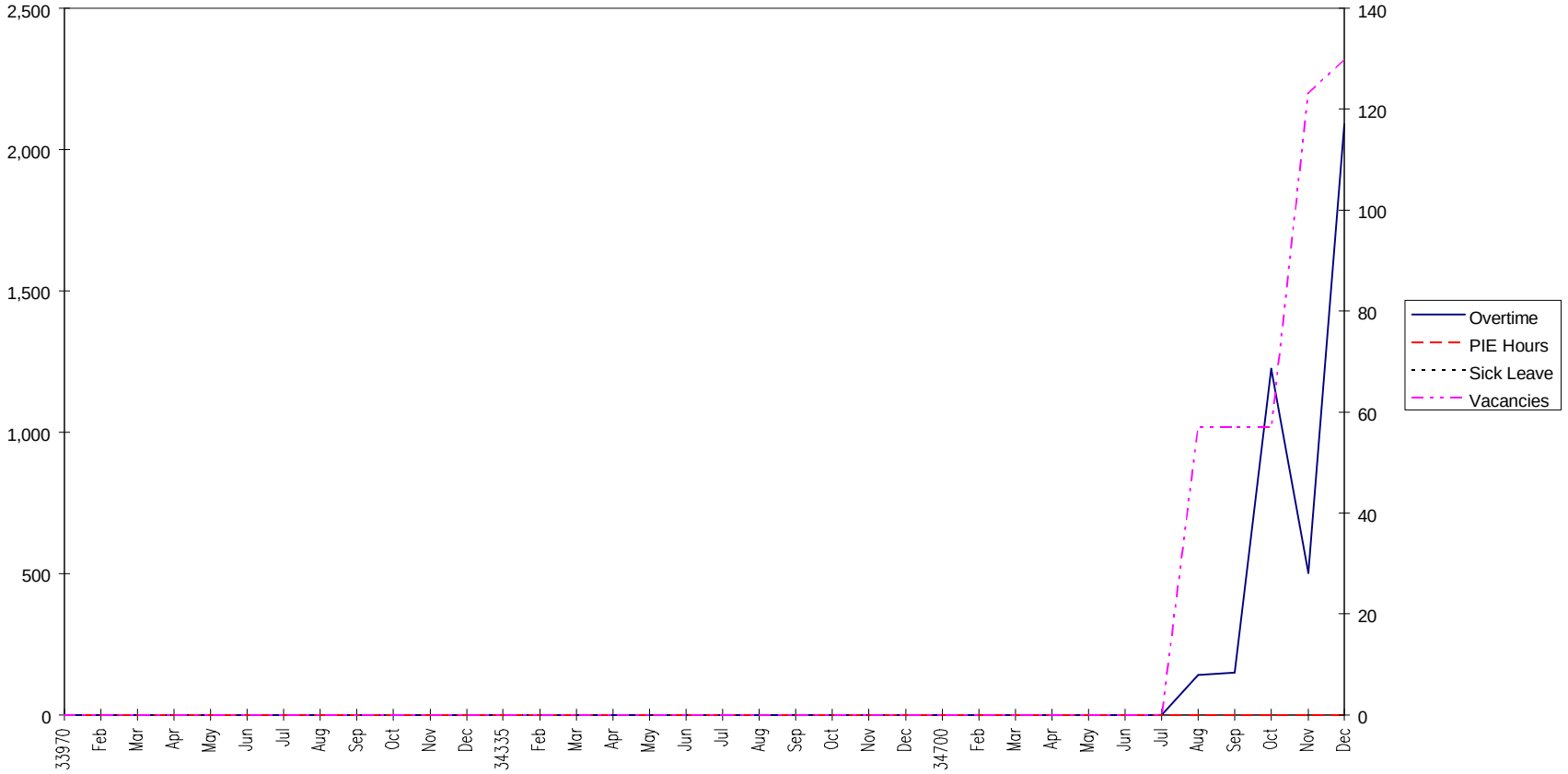
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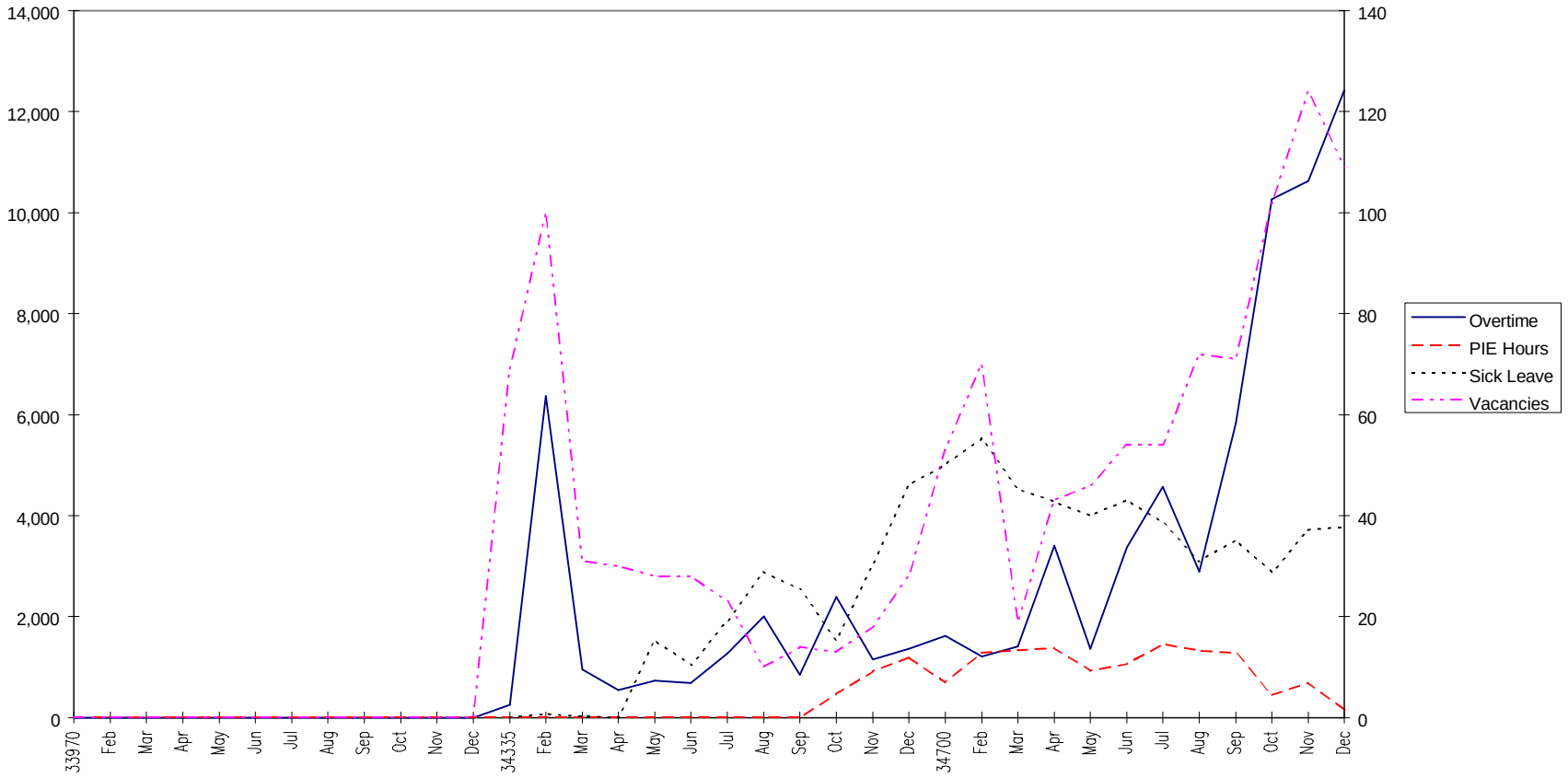
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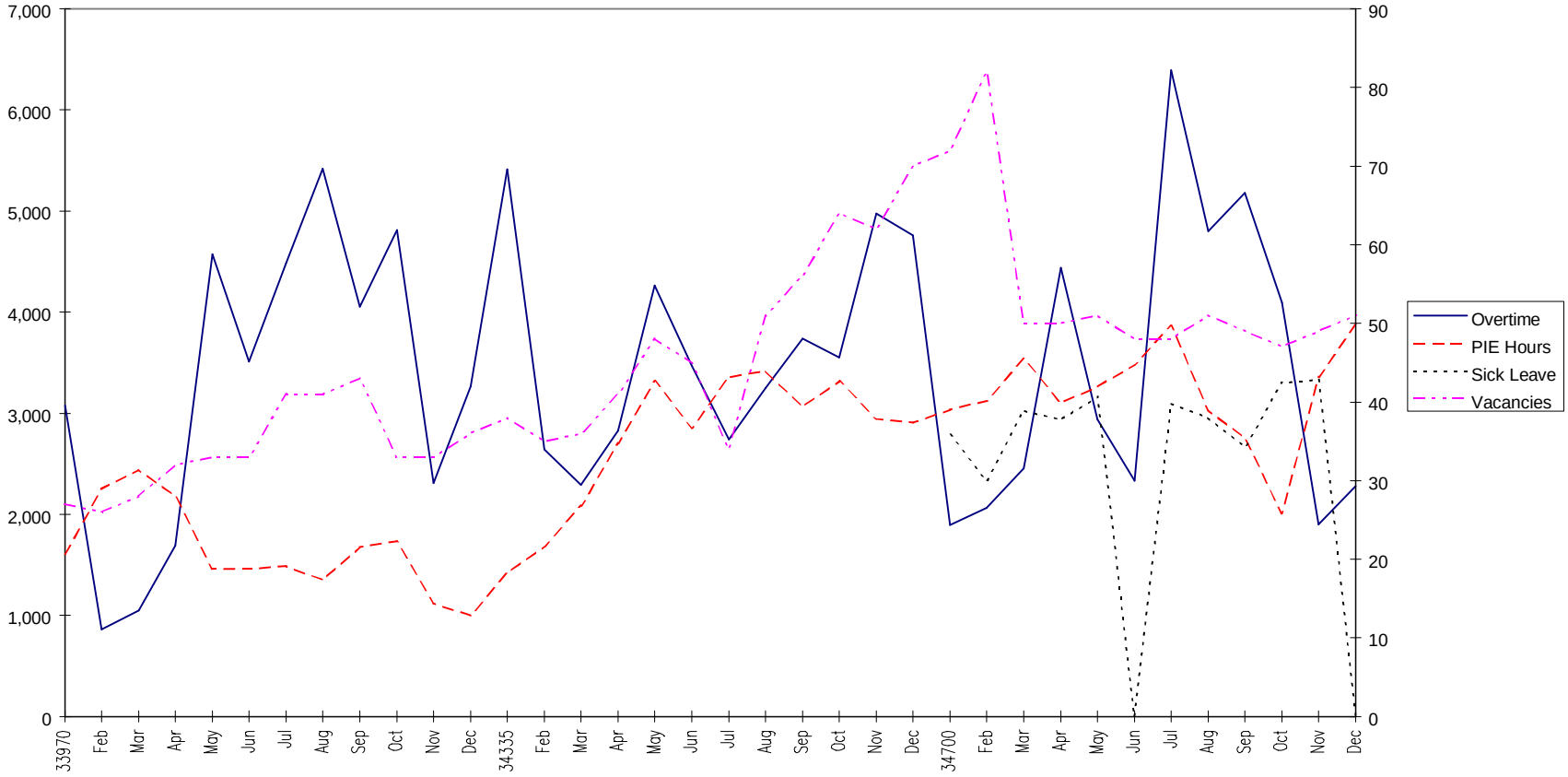
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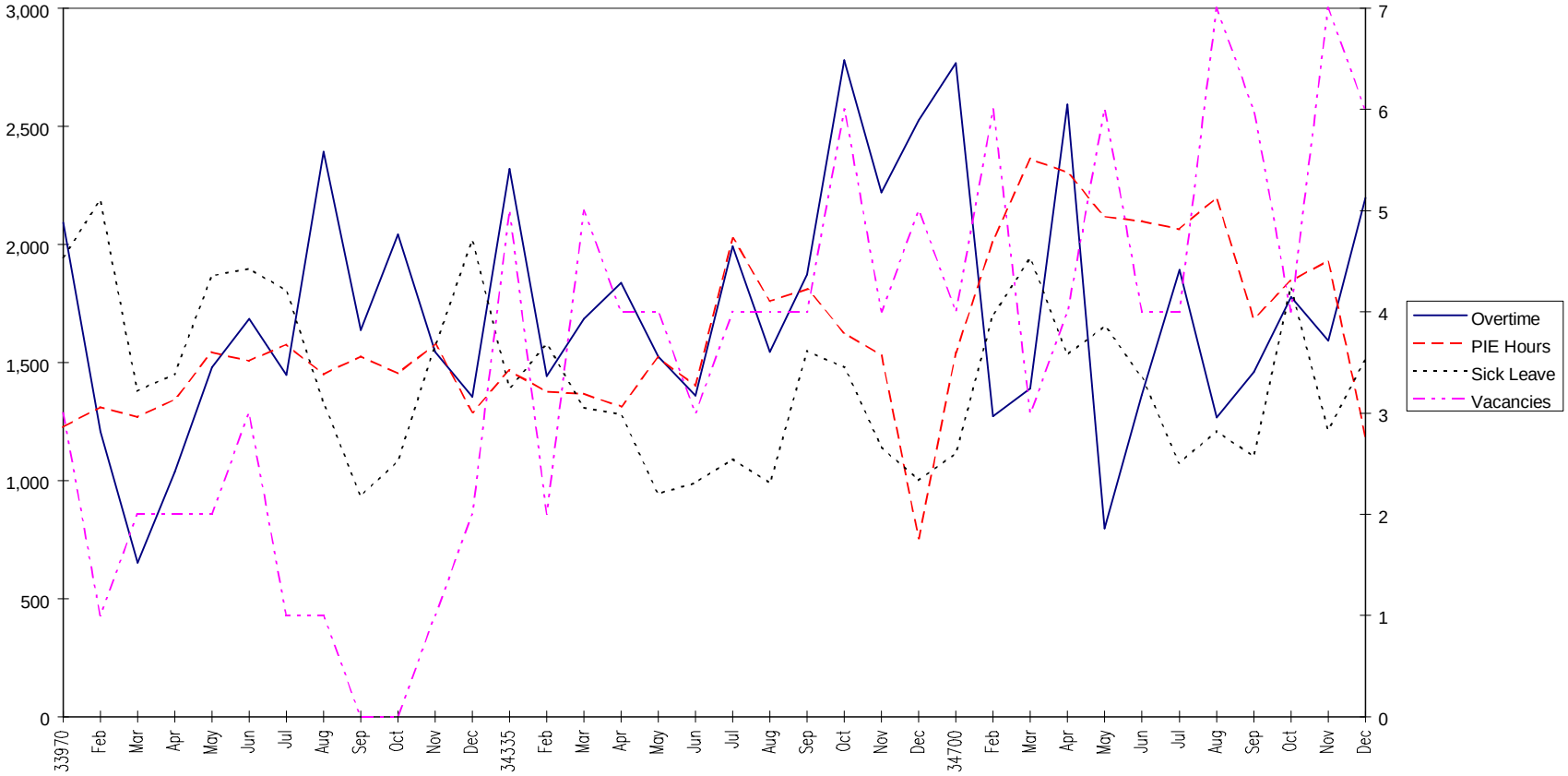
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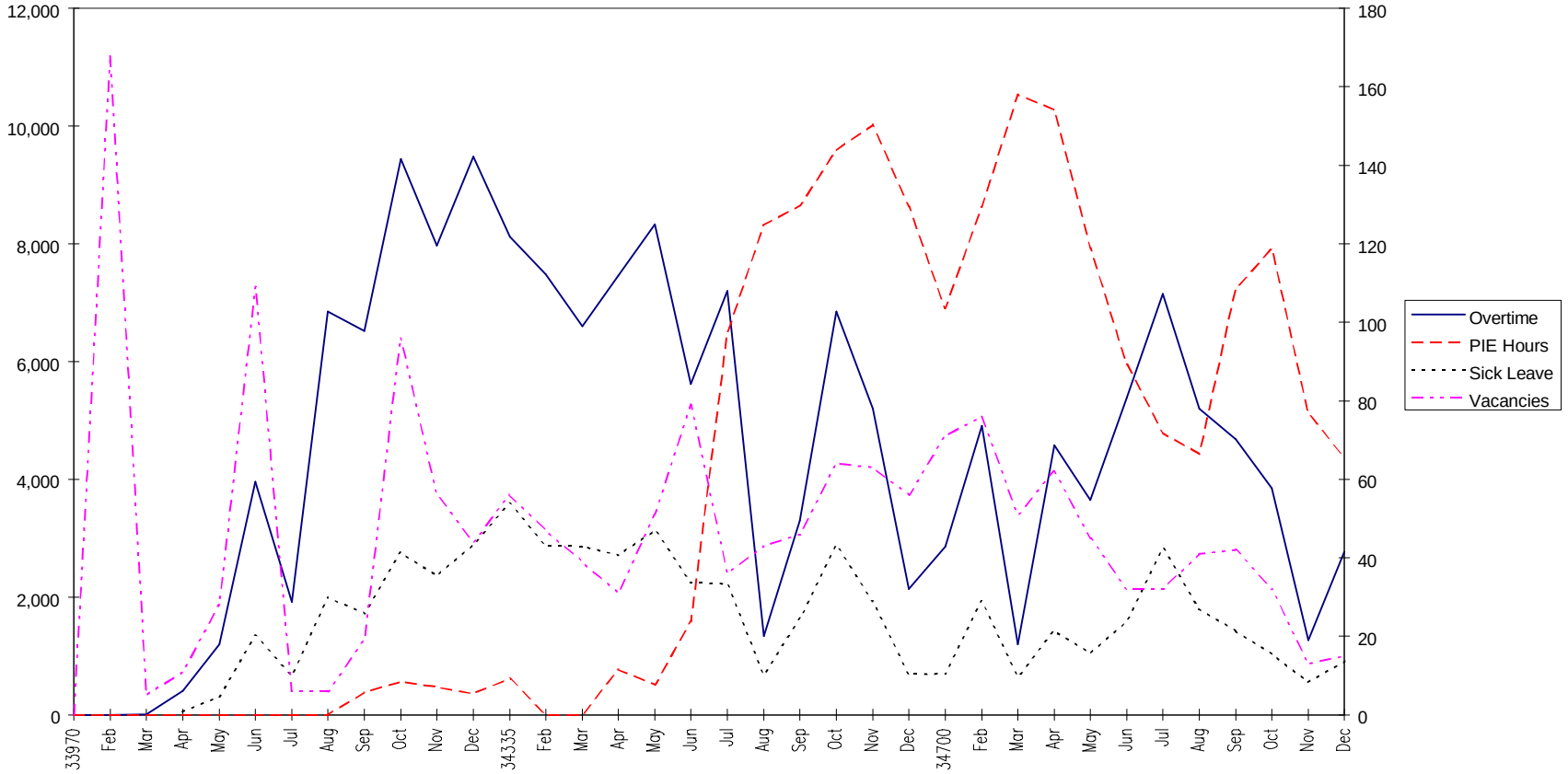
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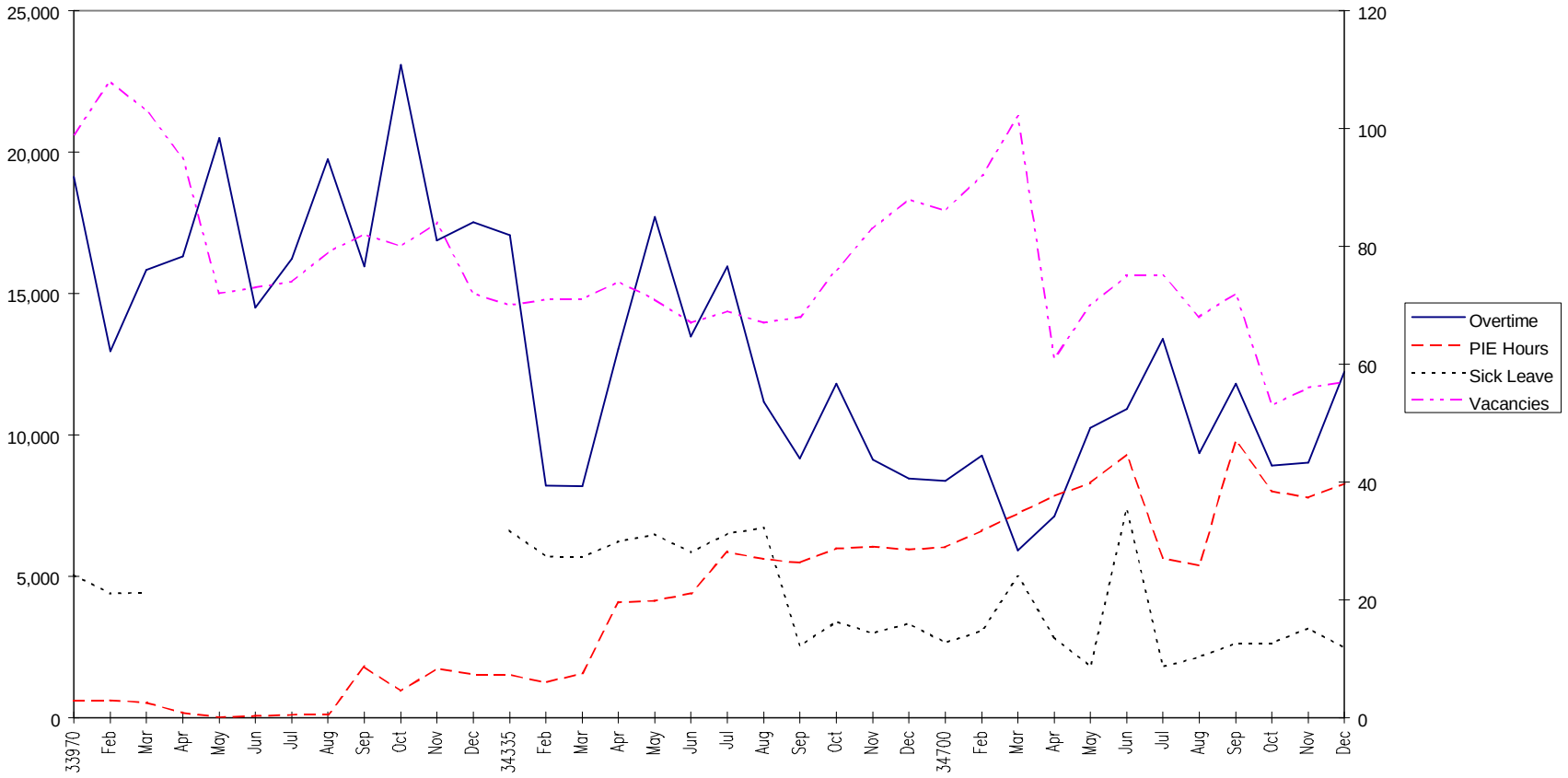
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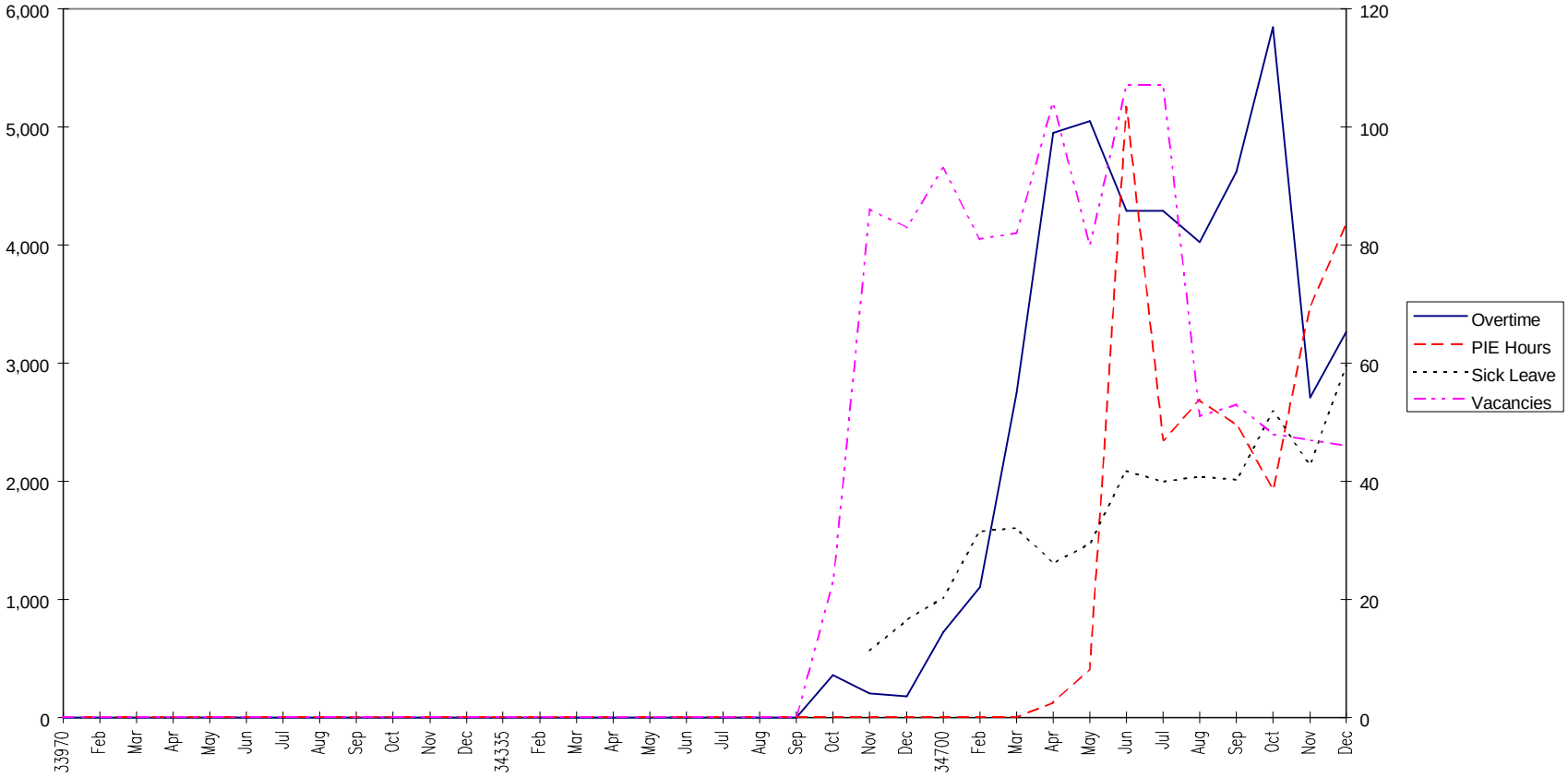

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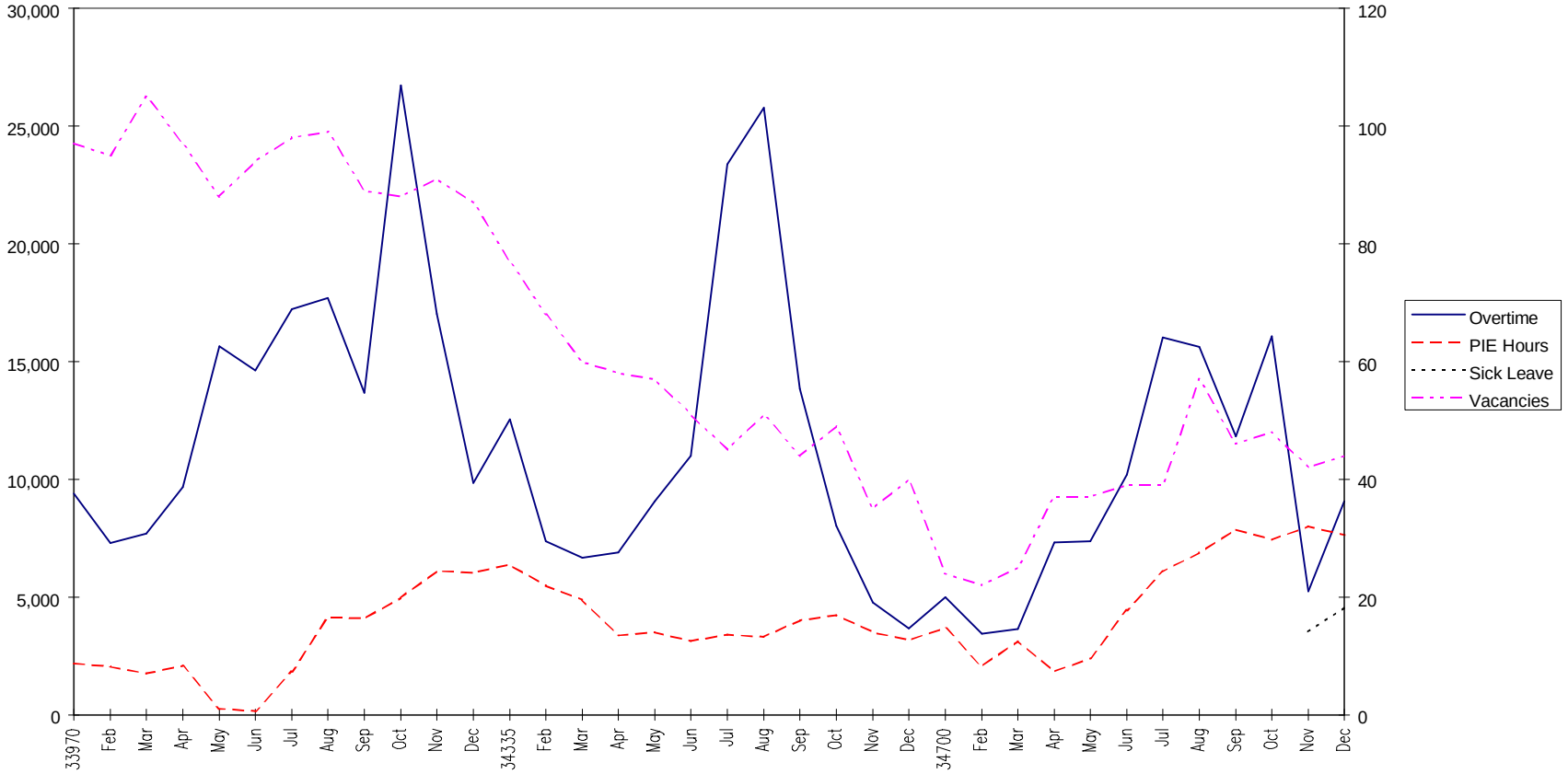

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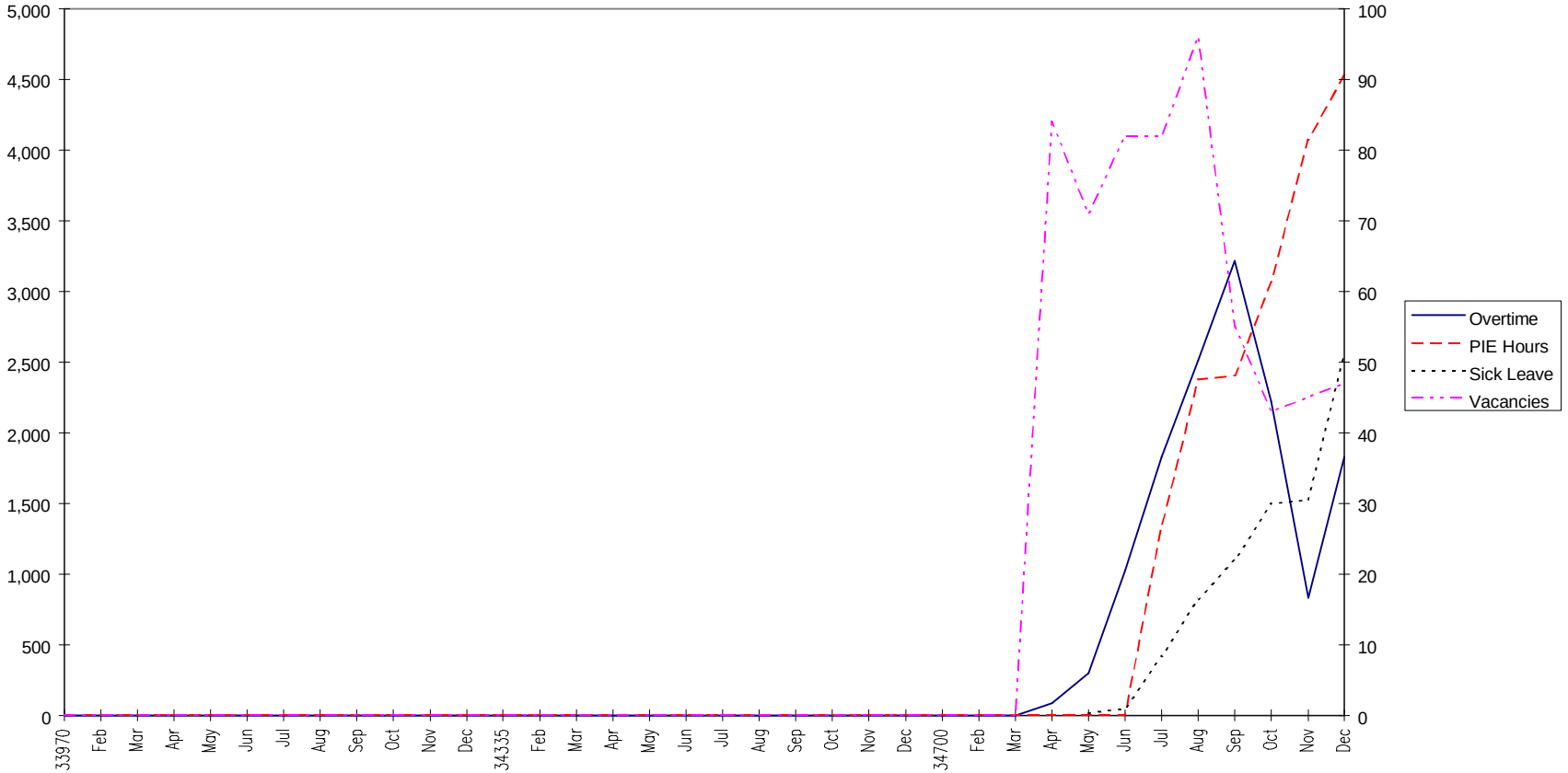
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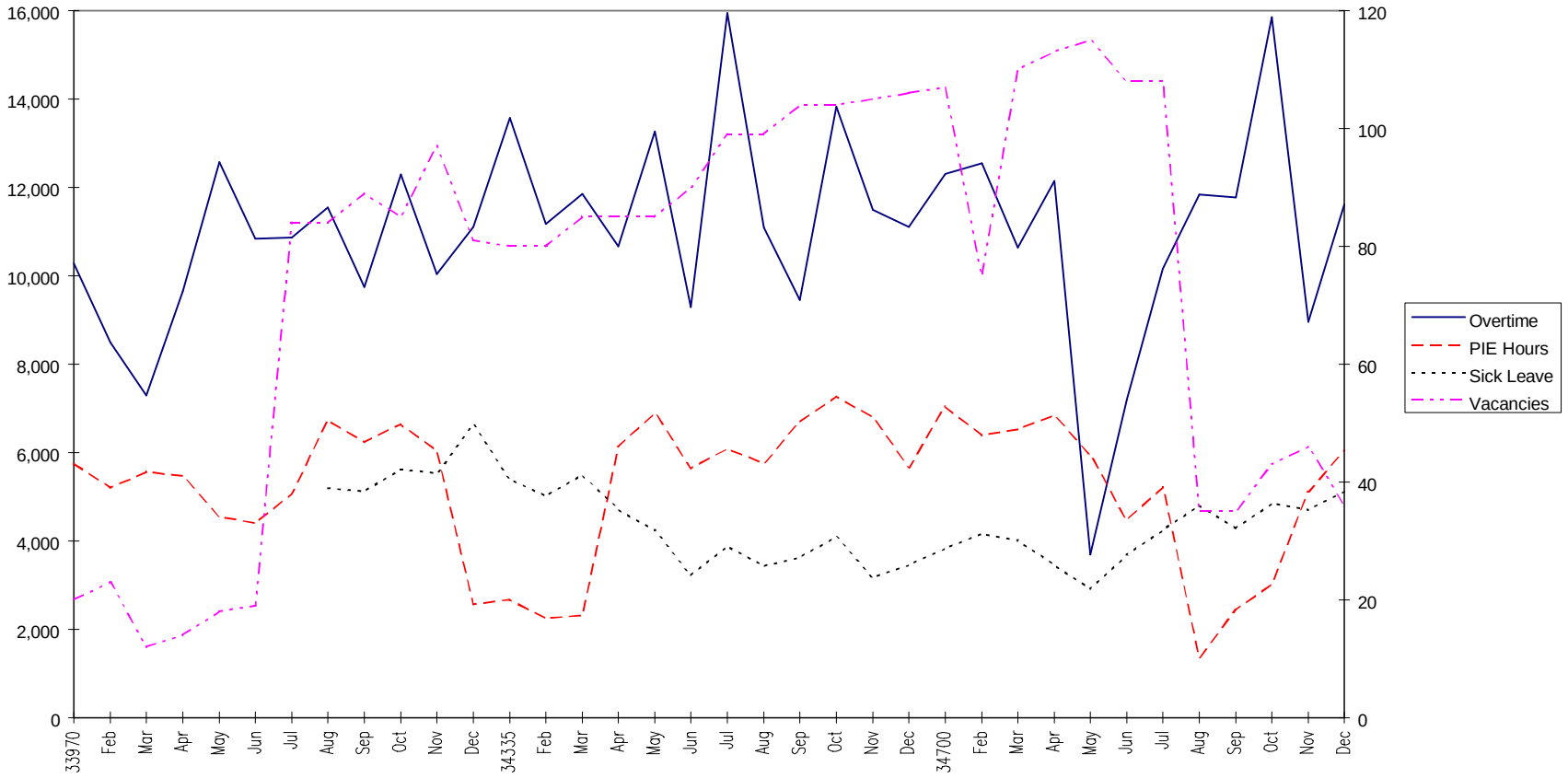
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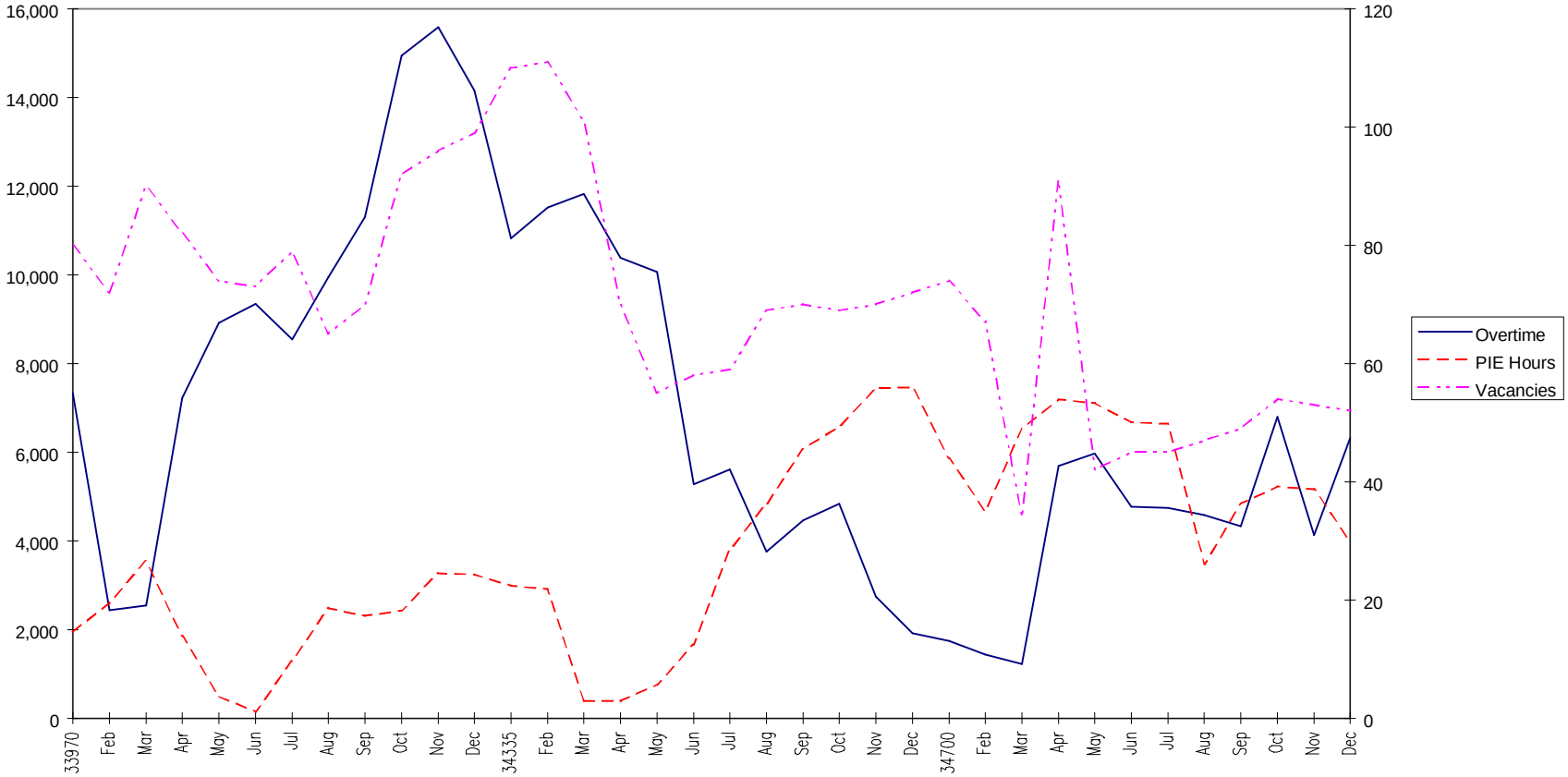
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APPENDIX B

THE ACADEMY

The Richard A. McGee Correctional Training Center, located in Galt, is known as the Academy and is the only entry point to a position of correctional officer in the California Department of Corrections (CDC). While a variety of training activities are carried on at the site, the major ongoing training is the preparation of cadets to take positions as correctional officers in the State's institutions.

THE HISTORY. Originally, the Academy trained only the number of cadets that institutions had indicated they needed. Apparently these decisions were largely based on the number of full time positions the institution expected to have within the next six to twelve months. In 1992, the Legislature believed that the prison population would decrease by as much as 20,000 inmates. Also at this time, electric fences were being installed which would decrease the need for some security personnel. As a consequence of that belief and the planning for the electric fences, the Academy was closed. Staff from the Academy and the Selection and Standards Branch, which screens and processes the applicants, were laid off or transferred.

Just a few months later, the funds were restored, and the Academy was reactivated. Since then, CDC staff have been struggling to restore the number of Academy graduates to its former level in order to meet the needs of the new prisons. One problem was that some of the qualified applicants who had been on the waiting list when the Academy closed, immediately took other jobs rather than wait to hear if the Academy would resume operations. This meant that the long application process had to be restarted.

THE ACADEMY. The Academy has a bed capacity for 510 trainees (called PIEs as soon as they are enrolled) and a staff capacity to serve 480 people. When the enrollment exceeds 480, additional training staff are requested from the institutions. The Academy can actually accommodate 530 cadets if at least 20 of them are from commuting distance, and so do not have to stay overnight on the grounds. The training term lasts for six weeks, including several week-ends. The seventh week is used for Academy staff to finish up the last crew and prepare for the next Saturday's entry of the new class. Of those enrolled, typically, 10 percent do not graduate, usually because they fail the shooting or academic aspects, although some leave because of illness or some personal or family reason. Those who have failed some aspect can be readmitted at a later time if they demonstrate that they have improved their skills (e.g. a community college certificate). The Selection and Standards Branch is

considering including evidence of academic and shooting skills as part of the application process.

RECRUITMENT. The Department does no formal recruiting. Individual institutions attend job fairs, and work with the Employment Development Department and colleges on career preparation. But there seems to be little need for recruitment. For 1994-95, CDC received about 60,000 applications for between 3200 and 4000 positions. Rather than recruit, the effort of the Department has been to decrease the amount of time and resources spent on applicants who will not meet their criteria.

THE SELECTION PROCESS. The process of selecting candidates for the Academy involves numerous steps. The Selection Support unit has been automating the process in what appears to be an efficient operation. At one time it was estimated that it cost $10,000 to process an applicant, but there were too many disagreements over how that amount was calculated. There are no current estimates.

It used to take up to 10 months for 12 staff members to process the large volume of applicants. Now with automation, two people can process 60,000 applications in a few months. A handbook is given to each applicant which requires the person to fill out various parts, and in the process some applicants discover they do not meet the minimum qualifications (such as citizenship). If the person continues with the application, an automated process determines the testing site and date, and sends out letters to applicants. The exam is a standardized test of 60 multiple choice items covering general areas like reading, math and spelling. Recently they tested 18,000 people in seven days in Los Angeles and Sacramento. The automated process corrects the exam and schedules an interview if the person passes, and the person is given this information before leaving the exam.

It is at this point that successful applicants indicate their preferred institutions. The next step is the Qualifications Appraisal Panel. Typically the Department runs nine panels a day, three each in Sacramento, Fresno and Rancho Cucamonga, their three field sites. The vision test is next, and those who pass take the physical skills test administered by an exercise physiologist. If this is not passed on the first try, individuals have the opportunity to take it twice more within the year. After passing the physical skills test, there is the background investigation including: Department of Justice; Federal Bureau of Investigation; identification of potential problems; inquiries to every employer and law enforcement agency where the person has worked and lived for the past seven years; interviews with family members, colleagues and references. An investigator then reviews all these results.

There are 50 investigators who are currently in the midst of collecting and reviewing information about 7000 applicants. The process averages about 11 hours per applicant, and

the investigators have production quotas. In fact, when there were reductions in staff in 1992, the reductions for investigators were based on productivity, not seniority. The lead sergeant reviews all reports, and the lieutenant reviews all disqualifications. The biggest delays are caused by waiting for responses from employers and collecting and reviewing an extensive arrest record. Of the 7000 applicants, 2000 are currently being actively worked on; the remaining 5000 are waiting for an investigator. Some are still pending from February 1995 because of delays in receiving additional information.

Sometimes when it looks like the investigation is prolonged and will likely result in a "no-hire," it will be set aside. The investigators notify applicants of their status in three categories: disqualification (e.g. felony conviction); set aside (e.g. there is a problem in the background that will have to wait to be explored); and potential employee. Thirty percent of the applicants are disqualified in the background investigation

Applicants who pass the background investigation receive a pre-employment medical exam. Following this, some people are flagged for psychological/psychiatric screening. The Department would like this for all applicants but it is too expensive. Tuberculosis tests are required, and paid for by CDC. Sometimes the Department conducts a "field test" for individuals with disabilities to determine if they are able to do the necessary work (e.g. for people who are color blind or, recently, for a person with one arm) to comply with the Americans with Disabilities Act.

ADMISSION TO THE ACADEMY. The Academy session lasts six weeks. In the one week interim between sessions, work for the previous term is finalized, and preliminary work is begun for the next term. For each session, letters are sent to about 900 applicants. Applicants who have received scores of 88 or higher in their prior testing are given a list of all vacancies at the institutions and they call in on a first call, first served basis to receive any full time or PIE positions available. There are usually about 200 people in this priority category. Three days later, a letter goes out to remaining applicants for PIE openings, usually at institutions in "less desirable" locations. Not all requests by the institutions can be filled. At a January 1996 Academy, there were 66 PIE openings at Ironwood, and only 53 trainees signed up for them. Calipatria received only 38 of the 51 it requested, and Centinela got 34 of 42.
People who are eligible for the Academy stay eligible for 4 years, so some try to get the institution of their choice by sitting out some sessions.

AFTER GRADUATION. Some of the graduates will have full time positions in new prisons. The new prisons try to maintain a 50/50 mix of new cadets and experienced personnel. There were 581 requests for graduates in January 1996, but that class graduated only 532 persons. Of the graduates, 39 were hired as full time employees and 493 were PIEs. As of January 11, 1996, there were 2142 PIEs in the system:

- 1340 -- working at institutions
- 353 -- new graduates being oriented to their assigned institutions
- 449 -- in training at the Academy.

APPENDIX C-1

OVERTIME HOURS COMPARISONS

Avenal

7/95 - 12/95 =	41,529	7/95 - 12/95 = 49.3% of total 1995
1/95 - 6/95 =	42,703	7/95 - 12/95 = a decrease of 2.7% over 1/95-6/95
7/94 - 12/94 =	41,916	7/95 - 12/95 = a decrease of 0.9% over 7/94-12/94
1/94 - 6/94 =	61,737	
7/93 - 12/93 =	80,667	
1/93 - 6/93 =	54,981	

Calipatria

7/95 - 12/95 =	26,797	7/95 - 12/95 = 53.8% of total 1995
1/95 - 6/95 =	22,968	7/95 - 12/95 = an increase of 16.7% over 1/95-6/95
7/94 - 12/94 =	40,317	7/95 - 12/95 = a decrease of 33.5% over 7/94-12/94
1/94 - 6/94 =	57,056	
7/93 - 12/93 =	75,710	
1/93 - 6/93 =	58,768	

CCC

7/95 - 12/95 =	72,860	7/95 - 12/95 = 67.5% of total 1995
1/95 - 6/95 =	35,059	7/95 - 12/95 = an increase of 107.8% over 1/95-6/95
7/94 - 12/94 =	108,695	7/95 - 12/95 = a decrease of 33.0% over 7/94-12/94
1/94 - 6/94 =	46,053	
7/93 - 12/93 =	79,653	
1/93 - 6/93 =	40,811	

CCI

7/95 - 12/95 =	51,798	7/95 - 12/95 = 66.0% of total 1995
1/95 - 6/95 =	26,684	7/95 - 12/95 = an increase of 94.1% over 1/95-6/95
7/94 - 12/94 =	37,687	7/95 - 12/95 = an increase of 37.4% over 7/94-12/94
1/94 - 6/94 =	108,042	
7/93 - 12/93 =	100,447	
1/93 - 6/93 =	106,502	

CCWF

7/95 - 12/95 =	42,624	7/95 - 12/95 = 50.3% of total 1995
1/95 - 6/95 =	42,042	7/95 - 12/95 = an increase of 1.4% over 1/95-6/95
7/94 - 12/94 =	28,703	7/95 - 12/95 = an increase of 48.5% over 7/94-12/94
1/94 - 6/94 =	40,866	
7/93 - 12/93 =	41,541	
1/93 - 6/93 =	22,032	

Centinela

7/95 - 12/95 =	70,864	7/95 - 12/95 = 72.8% of total 1995
1/95 - 6/95 =	26,489	7/95 - 12/95 = an increase of 167.5% over 1/95-6/95
7/94 - 12/94 =	83,553	7/95 - 12/95 = a decrease of 15.2% over 7/94-12/94
1/94 - 6/94 =	42,762	
7/93 - 12/93 =	6,366	
1/93 - 6/93 =	0	

CIM

7/95 - 12/95 =	37,069	7/95 - 12/95 = 48.0% of total 1995
1/95 - 6/95 =	40,090	7/95 - 12/95 = a decrease of 7.5% over 1/95-6/95
7/94 - 12/94 =	94,029	7/95 - 12/95 = a decrease of 60.6% over 7/94-12/94
1/94 - 6/94 =	63,749	
7/93 - 12/93 =	76,879	
1/93 - 6/93 =	38,753	

CIW

7/95 - 12/95 =	9,231	7/95 - 12/95 = 41.4% of total 1995
1/95 - 6/95 =	13,088	7/95 - 12/95 = a decrease of 29.5% over 1/95-6/95
7/94 - 12/94 =	32,042	7/95 - 12/95 = a decrease of 71.2% over 7/94-12/94
1/94 - 6/94 =	23,443	
7/93 - 12/93 =	18,593	
1/93 - 6/93 =	10,246	

CMC

7/95 - 12/95 =	26,664	7/95 - 12/95 = 43.8% of total 1995
1/95 - 6/95 =	34,265	7/95 - 12/95 = a decrease of 22.2% over 1/95-6/95
7/94 - 12/94 =	43,415	7/95 - 12/95 = a decrease of 38.6% over 7/94-12/94
1/94 - 6/94 =	65,911	
7/93 - 12/93 =	59,214	
1/93 - 6/93 =	56,825	

CMF

7/95 - 12/95 =	14,339	7/95 - 12/95 = 43.0% of total 1995
1/95 - 6/95 =	19,010	7/95 - 12/95 = a decrease of 24.6% over 1/95-6/95
7/94 - 12/94 =	21,339	7/95 - 12/95 = a decrease of 32.8% over 7/94-12/94
1/94 - 6/94 =	29,204	
7/93 - 12/93 =	59,891	
1/93 - 6/93 =	55,957	

Corcoran

7/95 - 12/95 =	114,952	7/95 - 12/95 = 77.4% of total 1995
1/95 - 6/95 =	33,656	7/95 - 12/95 = an increase of 241.5% over 1/95-6/95
7/94 - 12/94 =	74,502	7/95 - 12/95 = an increase of 54.3% over 7/94-12/94
1/94 - 6/94 =	122,407	
7/93 - 12/93 =	109,083	
1/93 - 6/93 =	84,664	

CRC

7/95 - 12/95 =	47,632	7/95 - 12/95 = 57.1% of total 1995
1/95 - 6/95 =	35,745	7/95 - 12/95 = an increase of 33.3% over 1/95-6/95
7/94 - 12/94 =	57,417	7/95 - 12/95 = a decrease of 17.0% over 7/94-12/94
1/94 - 6/94 =	56,249	
7/93 - 12/93 =	54,057	
1/93 - 6/93 =	36,218	

CTF

7/95 - 12/95 =	23,190	7/95 - 12/95 = 59.1% of total 1995
1/95 - 6/95 =	16,024	7/95 - 12/95 = an increase of 44.7% over 1/95-6/95
7/94 - 12/94 =	47,155	7/95 - 12/95 = a decrease of 50.8% over 7/94-12/94
1/94 - 6/94 =	75,417	
7/93 - 12/93 =	81,417	
1/93 - 6/93 =	71,774	

CVSP (Chuckawalla)

7/95 - 12/95 =	36,787	7/95 - 12/95 = 63.6% of total 1995
1/95 - 6/95 =	21,021	7/95 - 12/95 = an increase of 75.0% over 1/95-6/95
7/94 - 12/94 =	17,873	7/95 - 12/95 = an increase of 105.8% over 7/94-12/94
1/94 - 6/94 =	29,996	
7/93 - 12/93 =	37,113	
1/93 - 6/93 =	34,425	

DVI

7/95 - 12/95 =	25,513	7/95 - 12/95 = 47.4% of total 1995
1/95 - 6/95 =	28,277	7/95 - 12/95 = a decrease of 9.8% over 1/95-6/95
7/94 - 12/94 =	40,001	7/95 - 12/95 = a decrease of 36.2% over 7/94-12/94
1/94 - 6/94 =	46,053	
7/93 - 12/93 =	38,660	
1/93 - 6/93 =	31,996	

Folsom

7/95 - 12/95 =	13,327	7/95 - 12/95 = 52.6% of total 1995
1/95 - 6/95 =	12,000	7/95 - 12/95 = an increase of 11.1% over 1/95-6/95
7/94 - 12/94 =	26,884	7/95 - 12/95 = a decrease of 50.4% over 7/94-12/94
1/94 - 6/94 =	26,369	
7/93 - 12/93 =	40,096	
1/93 - 6/93 =	67,638	

Ironwood

7/95 - 12/95 =	46,600	7/95 - 12/95 = 79.0% of total 1995
1/95 - 6/95 =	12,359	7/95 - 12/95 = an increase of 277.1% over 1/95-6/95
7/94 - 12/94 =	9,013	7/95 - 12/95 = an increase of 417.0% over 7/94-12/94
1/94 - 6/94 =	9,524	
7/93 - 12/93 =	0	
1/93 - 6/93 =	0	

CSP-LA

7/95 - 12/95 =	53,441	7/95 - 12/95 = 60.2% of total 1995
1/95 - 6/95 =	35,269	7/95 - 12/95 = an increase of 51.5% over 1/95-6/95
7/94 - 12/94 =	35,620	7/95 - 12/95 = an increase of 50.0% over 7/94-12/94
1/94 - 6/94 =	82,431	
7/93 - 12/93 =	79,170	
1/93 - 6/93 =	14,977	

Mule Creek

7/95 - 12/95 =	24,650	7/95 - 12/95 = 60.5% of total 1995
1/95 - 6/95 =	16,124	7/95 - 12/95 = an increase of 52.9% over 1/95-6/95
7/94 - 12/94 =	23,010	7/95 - 12/95 = an increase of 7.1% over 7/94-12/94
1/94 - 6/94 =	20,908	
7/93 - 12/93 =	24,338	
1/93 - 6/93 =	14,756	

NCWF

7/95 - 12/95 =	10,187	7/95 - 12/95 = 50.0% of total 1995
1/95 - 6/95 =	10,178	7/95 - 12/95 = an increase of 0.1% over 1/95-6/95
7/94 - 12/94 =	12,935	7/95 - 12/95 = a decrease of 21.2% over 7/94-12/94
1/94 - 6/94 =	10,166	
7/93 - 12/93 =	10,416	
1/93 - 6/93 =	8,154	

North Kern

7/95 - 12/95 =	24,900	7/95 - 12/95 = 52.5% of total 1995
1/95 - 6/95 =	22,572	7/95 - 12/95 = an increase of 10.3% over 1/95-6/95
7/94 - 12/94 =	26,006	7/95 - 12/95 = a decrease of 4.3% over 7/94-12/94
1/94 - 6/94 =	43,594	
7/93 - 12/93 =	42,157	
1/93 - 6/93 =	5,574	

Pelican Bay

7/95 - 12/95 =	64,721	7/95 - 12/95 = 55.5% of total 1995
1/95 - 6/95 =	51,826	7/95 - 12/95 = an increase of 24.9% over 1/95-6/95
7/94 - 12/94 =	65,655	7/95 - 12/95 = a decrease of 1.4% over 7/94-12/94
1/94 - 6/94 =	77,672	
7/93 - 12/93 =	109,393	
1/93 - 6/93 =	99,202	

Pleasant Valley

7/95 - 12/95 =	24,754	7/95 - 12/95 = 56.7% of total 1995
1/95 - 6/95 =	18,866	7/95 - 12/95 = an increase of 31.2% over 1/95-6/95
7/94 - 12/94 =	742	7/95 - 12/95 = an increase of 3236.1% over 7/94-12/94
1/94 - 6/94 =	0	
7/93 - 12/93 =	0	
1/93 - 6/93 =	0	

RJ Donovan

7/95 - 12/95 =	33,322	7/95 - 12/95 = 43.4% of total 1995
1/95 - 6/95 =	43,389	7/95 - 12/95 = a decrease of 23.2% over 1/95-6/95
7/94 - 12/94 =	63,529	7/95 - 12/95 = a decrease of 47.5% over 7/94-12/94
1/94 - 6/94 =	80,308	
7/93 - 12/93 =	66,223	
1/93 - 6/93 =	42,936	

CSP-Sacramento

7/95 - 12/95 =	36,819	7/95 - 12/95 = 58.9% of total 1995
1/95 - 6/95 =	25,743	7/95 - 12/95 = an increase of 43.0% over 1/95-6/95
7/94 - 12/94 =	53,558	7/95 - 12/95 = a decrease of 31.3% over 7/94-12/94
1/94 - 6/94 =	47,062	
7/93 - 12/93 =	56,358	
1/93 - 6/93 =	0	

CSP-San Quentin

7/95 - 12/95 =	26,230	7/95 - 12/95 = 26.1% of total 1995
1/95 - 6/95 =	74,204	7/95 - 12/95 = a decrease of 64.7% over 1/95-6/95
7/94 - 12/94 =	98,064	7/95 - 12/95 = a decrease of 73.3% over 7/94-12/94
1/94 - 6/94 =	110,379	
7/93 - 12/93 =	99,076	
1/93 - 6/93 =	70,896	

SCC

7/95 - 12/95 =	73,836	7/95 - 12/95 = 66.6% of total 1995
1/95 - 6/95 =	36,967	7/95 - 12/95 = an increase of 99.7% over 1/95-6/95
7/94 - 12/94 =	79,423	7/95 - 12/95 = a decrease of 7.0% over 7/94-12/94
1/94 - 6/94 =	53,568	
7/93 - 12/93 =	102,168	
1/93 - 6/93 =	64,315	

CSP-Solano

7/95 - 12/95 =	70,186	7/95 - 12/95 = 54.5% of total 1995
1/95 - 6/95 =	58,511	7/95 - 12/95 = an increase of 20.0% over 1/95-6/95
7/94 - 12/94 =	72,913	7/95 - 12/95 = a decrease of 3.7% over 7/94-12/94
1/94 - 6/94 =	69,824	
7/93 - 12/93 =	65,588	
1/93 - 6/93 =	59,109	

Wasco

7/95 - 12/95 =	30,899	7/95 - 12/95 = 59.7% of total 1995
1/95 - 6/95 =	20,827	7/95 - 12/95 = an increase of 48.4% over 1/95-6/95
7/94 - 12/94 =	23,351	7/95 - 12/95 = an increase of 32.3% over 7/94-12/94
1/94 - 6/94 =	59,894	
7/93 - 12/93 =	74,489	
1/93 - 6/93 =	37,790	

APPENDIX C-2

CALIFORNIA DEPARTMENT OF CORRECTIONS
NUMBER OF INMATES PROCESSED THROUGH RECEPTION CENTERS
CALENDAR YEAR 1995

Institution	New Admissions	Parole Violators	Total	Population Jan. 95	Population Dec. 95
California Correctional Institution	5,031	2,143	7,174	985	897
California Institution for Men	548	20,593	21,141	3,808	3,920
California Institution for Women	1,393	2,562	3,955	278	210
California Rehabilitation Center - Men	1,044	1,192	2,236	3,900	4,008
California Rehabilitation Center - Women	258	240	498	903	812
Central California Women's Facility	3,547	2,218	5,765	3,125	2,831
Deuel Vocational Center	2,885	5,866	8,751	539	802
North Kern State Prison	11,678	5,128	16,806	1,343	1,048
Northern California Women's Facility	1	1,058	1,059	3,039	3,062
R.J. Donovan State Prison	4,994	5,241	10,235	101	107
San Quentin	8,852	9,783	18,635	1,091	1,077
Santa Rita County Jail	0	6,783	6,783	0	759
Wasco State Prison	9,186	8,953	18,139	3,074	3,083
Total	49,417	71,760	121,177		

APPENDIX D
TABLE D-1
COST COMPARISON OF A MEDIUM/MAXIMUM PRISON
GEORGIA TO CALIFORNIA

CONSTRUCTION COST COMPARISON

		Smith, Tattnall County	CSP-LA County
		GEORGIA	CALIFORNIA
CONSTRUCTION COSTS		$26,854,000	$205,107,000[a]
LESS ADJUSTMENTS			
WAGE/LABOR DISPARITY	(California $30.25/Georgia $12.69/labor 30% of total)		$(25,950,000)
CALIFORNIA SEISMIC COSTS	(3% of construction)		$(4,470,000)
SALES TAX	(2% difference on construction materials)		$(1,788,000)
WATER,WASTE WATER, OFFSITE ROADS & FEES			$(10,778,000)
OFFSITE GREENBELT/TRAFFIC MITIGATION			$(1,068,000)
EQUIPMENT			$(10,046,000)
EIR/PREDESIGN STUDIES			$(1,182,000)
ACQUISITION DISPARITY			$(11,248,000)
ADJUSTED CONSTRUCTION COSTS		$26,854,000	$138,577,000

BED CAPACITY COMPARISON

GEORGIA

		Cells	Overcrowding Capacity (Beds/Percentage)	
Level I (Dorms)		0	0	
Ad Seg (single bunked)		0	0	
Medium/Maximum cells		576	864	
	TOTAL	576	864	150%

CALIFORNIA

		Cells	Overcrowding Capacity (Beds/Percentage)	
Level I (dorms)		200	400	
Ag Seg (single bunked)		100	140	
Medium/ Maximum cells		1,900	3,410	
	TOTAL	2,200	3,950	180%

COST PER BED COMPARISON

	GEORGIA	CALIFORNIA
	$26,854,000/864 = $31,081	$138,577,000/3,950 = $35,083
ECONOMY OF SCALE ADJUSTMENT	$31,081	$38,981
GEORGIA COST PER BED AS PERCENT OF CALIF.	79.7%	

[a] Total costs of $206,556,439 were reduced by $1,448,958 to exclude the costs of converting the gymnasium to house inmates temporarily.

APPENDIX D
TABLE D-2
COST COMPARISON OF A MEDIUM/MAXIMUM PRISON
TEXAS TO CALIFORNIA

CONSTRUCTION COST COMPARISON

		Telford Unit, New Boston	Calipatria State Prison
		TEXAS	CALIFORNIA
CONSTRUCTION COSTS		$61,434,000[a]	$206,396,000
LESS ADJUSTMENTS			
WAGE/LABOR DISPARITY	(California $30.25/Texas $10.70/labor 30% of total)		$(30,465,000)
CALIFORNIA SEISMIC COSTS	(3% of construction)		$(4,714,000)
SALES TAX	(7.75% difference on construction materials)		$(7,306,000)
EIR MITIGATION; OFFSITE UTILITIES			$(15,613,000)
LAND, FEES, EQUIPMENT			$(36,770,000)
ADJUSTED CONSTRUCTION COSTS		$61,434,000	$111,528,000

BED CAPACITY COMPARISON

TEXAS

	Cells	Overcrowding Capacity (Beds/Percentage)	
Reception Cells (double bunked)	9	18	
Ad Seg (single bunked)	504	504	
Medium/Maximum cells	864	1,728	
TOTAL	1,377	2,250	163%

CALIFORNIA

	Cells	Overcrowding Capacity (Beds/Percentage)	
Level I (dorms)	208	408	
Ag Seg (single bunked)	100	140	
Medium/ Maximum cells	1,900	3,230	
TOTAL	2,208	3,778	171%

COST PER BED COMPARISON

	TEXAS	CALIFORNIA
	$61,434,000/2,250 = $27,304	$111,528,000/3,778 = $29,520
ECONOMY OF SCALE ADJUSTMENT (5%)	$27,304	$31,074
TEXAS COST PER BED AS PERCENT OF CALIF.	87.9%	

[a] The total project budget of $68,887,687, in 1995 prices, was converted to 1992 prices by multiplying by 0.8918. The conversion factors were obtained from the index values in Comparative Cost Multipliers, Section 98, published by the Marshall Valuation Service, Marshall and Swift, Los Angeles (April 1996).

NOTES FOR APPENDIX D

Assumptions and Calculations for Table D-1

Costs for California State Prison (CSP), Los Angeles County (LAC) were as follows:

Total Project Cost $205,107,000
Total Construction Cost $149,011,000
Labor Costs (Est) = 30% of Construction Cost = (0.30) ($149,011,000) = $44,703,300
Wage Labor Disparity = ((CA Wage - GA Wage) / CA Wage) (Labor Cost)
= (($30.25-$12.69)/ $30.25) ($44,703,300) = $25,950,081
Seismic Costs = 3% of Construction Cost = (0.03) ($149,011,000) = $4,470,330
Cost of Materials (Est) = 60% of Construction Cost = (0.60) ($149,011,000)
= $89,406,600
Sales Tax Disparity = 2% of Cost of Materials = (0.02) ($89,406,600) = $1,788,132

Assumptions and Calculations for Table D-2

Costs for California State Prison (CSP), Calipatria were as follows:

Total Project Cost $206,396,000
Total Construction Cost $157,128,000
Labor Costs (Est) = 30% of Construction Cost = (0.30) ($157,128,000) = $47,138,400
Wage Labor Disparity = ((CA Wage - TX Wage) / CA Wage) (Labor Cost)
= (($30.25-$10.70)/$30.25) ($47,138,400) = $30,464,652
Seismic Costs = 3% of Construction Cost = (0.03) ($157,128,000) = $4,713,840
Cost of Materials (Est) = 60% of Construction Cost = (0.60) ($157,128,000)
= $94,276,800
Sales Tax Disparity = 7.75% of Materials Cost = (0.0775) ($94,276,800) = $7,306,452

APPENDIX E

COST COMPARISONS OF PRISON CONSTRUCTION FOR CALIFORNIA, GEORGIA, TEXAS, ARIZONA AND FLORIDA

To compare the California prison construction costs to those in other states, we first adjusted the construction costs of the California State Prison, Los Angeles County (LAC)[69] by the differences in costs for the land, utilities, offsite costs and offsite fees, environmental requirements and equipment in the same way as in Appendix D, Table D-1. However, instead of adjusting separately for the differences between California and other states in wage rates, seismic requirements and sales tax rates, we used a construction cost index that is designed to measure differences among states in costs associated with these variables. We used the Construction Cost Index values published by the Construction Industry Research Board (CIRB) for this comparison. The index and adjustment factors for 1995 are presented in Table E-1 below. Tables E-2 to E-5 provide the details of the comparisons.

TABLE E-1

CONSTRUCTION COST INDEX FOR SELECTED STATES/CITIES FOR ALL CONSTRUCTION, 1995 PUBLISHED BY CONSTRUCTION INDUSTRY RESEARCH BOARD

State and City	CIRB Index for All Construction (1995)	Adjustment Factor for 1995 (Calif = 1.0)
California (Fresno)	118%	1.0000
Georgia (Savannah)	91%	0.7712
Florida (Jacksonville)	90%	0.7627
Texas (Lubbock)	90%	0.7627
Arizona (Phoenix)	96%	0.8136

[69] For the comparison between California and Texas, we used CSP-Calipatria to be consistent with CDC's comparison.

APPENDIX E

COST COMPARISONS OF PRISON CONSTRUCTION FOR CALIFORNIA, GEORGIA, TEXAS, ARIZONA AND FLORIDA

TABLE E-2

PRISON CONSTRUCTION COSTS CALIFORNIA AND GEORGIA

	CALIFORNIA (CSP L.A. Co.)	CALIF COSTS ADJUSTED BY GEORGIA INDEX	GEORGIA'S ACTUAL COSTS (Smith)
Total Cost	$205,107,000[a]		$26,854,000[b]
Less Adjustments	34,322,000[c]		
Adjusted Construction Costs	170,785,000		
Cost Index Adjustmt Factor	1.0000	0.7712	
Adjusted Cost of Construction		$131,709,392	
Number of Beds (Overcrowding Capacity)		3,950	864
Cost per Bed		$33,344	$31,081
Economy of Scale Adjustment (10%)		$37,049	$31,081
Cost per Bed as percent of Calif.			83.9%

[a] Total costs of $206,556,439 were reduced by $1,448,958 to exclude the costs of converting the gymnasium to house inmates temporarily.
[b] Total cost, in 1993 prices, is $26,853,907. It does not include movable equipment and utility costs.
[c] Adjustments were same as in Table D-1 excluding wages, seismic and sales tax disparities.

APPENDIX E

COST COMPARISONS OF PRISON CONSTRUCTION FOR CALIFORNIA, GEORGIA, TEXAS, ARIZONA AND FLORIDA

TABLE E-3

PRISON CONSTRUCTION COSTS CALIFORNIA AND FLORIDA

	CALIFORNIA (CSP L.A. Co.)	CALIF COSTS ADJUSTED BY FLORIDA INDEX	FLORIDA'S ACTUAL COSTS[a]
Total Cost	$205,107,000		$30,292,000
Less Adjustments	34,322,000[b]		
Adjusted Construction Costs	170,785,000		30,292,000
Cost Index Adjustmt Factor	1.0000	0.7627	
Adjusted Cost of Construction		$130,257,720	
Number of Beds (Overcrowding Capacity)		3,950	1,400
Cost per Bed		$32,977	$21,637
Economy of Scale Adjustment (5%)		$34,713	$21,637
Cost per Bed as percent of Calif.			62.3%

[a] Total costs, in 1996 prices, for a hypothetical (prototype 1) maximum security prison for 1,400 beds is estimated to be $34,583,592. These costs were converted to 1993 prices by multiplying by 0.8759. The conversion factors were obtained from the index values in Comparative Cost Multipliers, Section 98, published by the Marshall Valuation Service, Marshall and Swift, Los Angeles (April 1996).

[b] Adjustments were same as in Table D-1, excluding wages, seismic and sales tax disparities.

APPENDIX E

COST COMPARISONS OF PRISON CONSTRUCTION FOR CALIFORNIA, GEORGIA, TEXAS, ARIZONA AND FLORIDA

TABLE E-4

PRISON CONSTRUCTION COSTS CALIFORNIA AND TEXAS

	CALIFORNIA (CSP Calipatria)	CALIF COSTS ADJUSTED BY TEXAS INDEX	TEXAS ACTUAL COSTS (Telford Unit, New Boston)
Total Cost	$206,396,000		$61,434,000[a]
Less Adjustments	52,383,000[b]		
Adjusted Construction Costs	154,013,000		
Cost Index Adjustmt Factor	1.0000	0.7627	
Adjusted Cost of Construction		$117,465,715	
Number of Beds (Overcrowding Capacity)		3,778	2,250
Cost per Bed		$31,092	$27,304
Economy of Scale Adjustment (5%)		$32,728	$27,304
Cost per Bed as percent of Calif.			83.4%

[a] The total project budget of $68,887,687, in 1995 prices, was converted to 1992 prices by multiplying by 0.8918. The conversion factors were obtained from the index values in Comparative Cost Multipliers, Section 98, published by the Marshall Valuation Service, Marshall and Swift, Los Angeles (April 1996).

[b] Adjustments were same as in Table D-2, excluding wages, seismic and sales tax disparities.

APPENDIX E

COST COMPARISONS OF PRISON CONSTRUCTION FOR CALIFORNIA, GEORGIA, TEXAS, ARIZONA AND FLORIDA

TABLE E-5

PRISON CONSTRUCTION COSTS CALIFORNIA AND ARIZONA

	CALIFORNIA (CSP L.A. Co.)	CALIF COSTS ADJUSTED BY ARIZONA INDEX	ARIZONA'S ACTUAL COSTS (Rynning)
Total Cost	$205,107,000		$21,860,000[a]
Less Adjustments	34,322,000[b]		
Adjusted Construction Costs	170,785,000		21,860,000
Cost Index Adjustmt Factor	1.0000	0.8136	
Adjusted Cost of Construction		$138,950,676	
Number of Beds (Overcrowding Capacity)		3,950	880
Cost per Bed		$35,177	$24,841
Economy of Scale Adjustment (5%)		$37,028	$24,841
Cost per Bed as percent of Calif.			67.1%

[a] The total project budget of $22,175,000 was in 1991 dollars. This was multiplied by 0.9858 to convert to 1993 prices. The conversion factors were obtained from the index values in Comparative Cost Multipliers, Section 98, published by the Marshall Valuation Service, Marshall and Swift, Los Angeles (April 1996).

[b] Adjustments were same as in Table D-1, excluding wages, seismic and sales tax disparities.

APPENDIX F

FEDERAL BUREAU OF PRISONS

To compare California's construction costs with those of the federal government, we obtained information from the Federal Bureau of Prisons regarding the correctional complex in Florence, Colorado that opened in 1994. The Florence complex is made up of four separate facilities: the Federal Prison Camp (minimum security), the Federal Correctional Institution (medium security), the United States Penitentiary (maximum security), and the United States Penitentiary ADX (administrative maximum security, similar to California's special housing units). Table F-2 shows the total construction cost per design bed and per inmate housed in April 1996 based on the same methodology used in the prior section of this chapter. Further details concerning the Bureau's Florence institution are contained in Table F-1.

As indicated in Table F-2, after adjusting for differences in wages between California and Colorado, we found the costs of constructing the federal prisons exceeded the CDC's costs of constructing a comparable State prison by between 24 and 43 percent, depending on whether cost per design bed or cost per inmate (based on recent population figures) were used for the comparison.

APPENDIX F

TABLE F-1

FEDERAL CORRECTIONAL COMPLEX IN FLORENCE, COLORADO CONSTRUCTION COSTS OF NEW PRISONS[a]

	Federal Prison Camp	Federal Corr Institution	United States Penintentiary	United States Penintentiary ADX	Total
Security Level	Minimum	Medium	Maximum	Admin Max	
Type of Housing	Open Dorms	Cells, double bunked	Cells, double bunked	Cells, single bunked	
Cell Count	256 Cubicles	496 Cells	512 Cells	480 Cells	1,744 Cells
Rated Cap	512 Beds (200%)	744 Beds (150%)	640 Beds (125%)	480 Beds	2,376 Beds
Addl Cells	None	72 Ad Seg	75 Ad Seg	80 Ad Seg	227 Ad Seg
Total Cells or Cubicles	256 Cubicles	568 Ttl Cells	587 Ttl Cells	560 Ttl Cells	1,971 Ttl Cells
Inmate Count on 4/11/96	484 inmates	1,094 inmates	995 inmates	335 inmates	2,908 inmates
Bldg Cost	$ 12,800,000	$ 48,500,000	$ 50,400,000	$ 59,000,000	$170,700,000
Bldg+Equip & Systems Cost	Combined with the next column	$64,144,000[b] (for min & med)	$ 52,845,000	$ 61,611,000	$178,600,000
Total Cost	Combined with next col	$72,173,000 (for min & med)[b]	$ 59,355,000	$ 68,772,000	$200,300,000
Build Area	97,000 sq ft.	347,042 sq ft	357,943 sq ft.	395,000 sq ft.	1,196,985sqft
Bldg Cost per sq ft.	$ 131.96	$ 139.75	$ 140.80	$ 149.37	$ 142.61
Bldg Cost per Cell	$ 50,000	$ 85,387	$ 85,860	$ 105,357	$ 86,606
Bldg Cost per bed based on rated cap	$ 25,000	$ 65,188	$ 78,750	$ 122,917	$ 71,843
Bldg+Equip & Sys. Cost/Sq ft.	Combined with next col	$ 144.45 (for min & med) [b]	$ 147.64	$ 155.98	$ 149.21
TC/Sq ft.	Combined with next col.	$ 162.54 (for min & med) [b]	$ 165.82	$ 174.11	$ 167.34
TC/Cell	Combined with next col	$ 95,975 (for min & med) [b]	$ 101,116	$ 122,807	$ 101,624
TC/Bed, based on rated cap	Combined with next col	$ 57,463(for min & med) [b]	$ 92,742	$ 143,275	$ 84,301

[a] NOTE: The cost of construction in Denver, Colorado are 83.9 percent of California's (Fresno) cost, according to the 1995 Cost Index Values published by the Construction Industry Research Board.

[b] Represents subtotal for camp(minimum security) and the correctional institution (medium security)

APPENDIX F

TABLE F-2

PRISON CONSTRUCTION COSTS
CALIFORNIA AND FEDERAL PRISONS

	CALIFORNIA (CSP L.A. Co.)	CALIF COSTS ADJUSTED BY COLORADO INDEX	FEDERAL PRISON ACTUAL COSTS (Med. And Max. Facilities at Florence, Colorado)
Total Cost	$205,107,000		$118,833,000[a]
Cost Index Adjustment Factor	1.0000	0.8390	
Adjusted Total Cost		$172,084,773	
Number of Beds (Design Capacity)		2,200	1,008
Cost per Design Bed		$78,220	$117,890
Economy of Scale Adjustment (5%)[b]		$82,337	
Cost per Bed as percent of California			143.2%
Number of Inmates Housed @ 4/96		3,950	2,089
Cost per Housed Inmate		$43,566	$56,885
Economy of Scale Adjustment (5%)[b]		$45,859	
Cost per Housed Inmate as percent of California			124.0%

[a]The estimated costs of the medium security facility were $57,103,000 in 1992 prices. These were converted to 1993 prices by multiplying by 1.0416. The resulting amount of $59,478,000 was added to the $59,355,000 cost (in 1993 prices) of the maximum security prison to obtain the combined cost for the medium and maximum prisons, in 1993 prices.

[b]For this comparison, we assumed that there will be economies of scale of five percent because California prisons are designed and constructed as one project as compared to the separate projects for the security levels for the federal correctional complex.

APPENDIX G
CORCORAN II COST PER BED

APPENDIX G CORCORAN II COST PER BED					
	Level I	Level II	Level III	Level IV	Distributed Across Levels
Design Beds	100	756	1,000	512	2,368
Number of Inmates at HOC	200	1,512	1,850	973	4,535
Housing (Regular)	$1,296,000	$12,836,000	$22,465,000	$22,313,000	
Housing (Ad Seg)			$2,791,867		
BPT		$2,535,000	$2,535,000	$1,479,000	
Grading & Drainage					$5,914,460
Water, WW/Utilities, Roads, Fencing					$25,321,346
Less Perimeter Fence and Electric Fence					-$4,634,288
Wastewater Conveyance & Applicatior					$2,304,626
Perimeter Towers					$1,645,447
Prison Wide Hardware					$1,309,170
Food Service Satellites		$3,917,080	$3,917,080		
Central Retherm Kitchen				$1,260,459	
Central Kitchen & Diet Kitchen					$3,658,505
Steam Generation Building					$467,200
Central Operations					$705,850
Receiving and Release					$656,763
FPSS with Gym		$6,474,511	$6,474,511		
FPSS without Gym				$2,278,690	
Stand Alone Gym				$978,087	
Bridges and Stairs					$266,044
Yard Gunpost, Walls, Catwalks				$866,648	
Mental Health Services					$551,667
Prison Wide Fire Equipmnent					$133,463
Voc. Ed., AC, Ed., Gov. & Comm. Sup		$5,234,183	$4,900,086	$2,239,686	
Workzone Food Service Satellite		$666,866	$666,866	$333,433	
Building Maintenance Satellite		$357,632	$178,816	$178,816	
Central Building Maintenance			$178,816		$486,403
Work Change		$173,109	$173,109	$86,555	
Volatile Storage		$33,675	$33,675	$16,838	
Library/Media/AIC					$361,936
WH, RASP, Maint/Non-Sec Sup					$9,865,792
Auxiliary Systems					$1,939,885
Offsite Road Improvements					$1,896,725
Central Health Services Building					$6,839,862
Prepurchase/Agency Retained			$1,432,613	$787,560	$17,382,355
Equipment		$360,000			$15,452,530
Site Acquisition					$2,000,000
Fees					$35,538,907
Subtotal	$1,296,000	$32,588,056	$45,747,439	$32,818,772	$130,064,648
Level-Specific Cost Per Design Bed	$12,960	$43,106	$45,747	$64,099	
Level-Specific Cost Per HOC Inmate	$6,480	$21,553	$24,728	$33,729	
Distributed Cost per Design Bed	$54,926	$54,926	$54,926	$54,926	$54,926
Distributed Cost per HOC Inmate	$28,680	$28,680	$28,680	$28,680	$28,680
Distributed Fence Costs per Design Bed		$2,043	$2,043	$2,043	$2,043
Distributed Fence Costs per HOC Inmate		$1,069	$1,069	$1,069	$1,069
Total Cost Per Design Bed	$67,886	$100,075	$102,717	$121,068	
Total Cost Per HOC Inmate	$35,160	$51,302	$54,478	$63,479	
Housing Cost per Design Bed	$12,960	$16,979	$25,257	$43,580	
Housing Cost per HOC Inmate	$6,480	$8,489	$13,652	$22,932	

APPENDIX H

CONSULTANT FEES FOR SELECTED PRISON CONSTRUCTION PROJECTS
(Dollars in Thousands)

Construction Project	Total Construction Costs	PM Fees	Percent of Construction Costs	CM Fees	Percent of Construction Costs	DSA Fees	Percent of Construction Costs	AE Fees	Percent of Construction Costs	Misc. Fees	Percent of Construction Costs	Total Fees	Percent of Construction Costs
Calipatria	$157,128	$3,100	2.0%	$5,770	3.7%	$3,360	2.1%	$8,888	5.7%	$1,141	0.7%	$22,259	14.2%
North Kern	$132,744	$2,012	1.5%	$6,265	4.7%	$3,011	2.3%	$4,932	3.7%	$1,637	1.2%	$17,857	13.5%
L.A. County	$147,164	$3,343	2.3%	$5,903	4.0%	$2,816	1.9%	$9,714	6.6%	$2,156	1.5%	$23,932	16.3%
Centinela	$145,081	$3,783	2.6%	$6,713	4.6%	$3,488	2.4%	$10,986	7.6%	$1,490	1.0%	$26,460	18.2%
Ironwood	$155,546	$5,032	3.2%	$7,799	5.0%	$4,191	2.7%	$13,723	8.8%	$1,883	1.2%	$32,628	21.0%
Pleasant Valley	$139,334	$5,066	3.6%	$5,338	3.8%	$3,516	2.5%	$11,740	8.4%	$1,876	1.3%	$27,536	19.8%
VSPW	$120,798	$4,172	3.5%	$6,453	5.3%	$2,786	2.3%	$8,626	7.1%	$1,590	1.3%	$23,627	19.6%
High Desert	$198,510	$5,060	2.5%	$7,669	3.9%	$3,321	1.7%	$15,070	7.6%	$2,440	1.2%	$33,560	16.9%
Salinas Valley	$171,813	$4,669	2.7%	$6,437	3.7%	$3,681	2.1%	$9,077	5.3%	$1,506	0.9%	$25,370	14.8%
TOTAL	$1,368,118	$36,237	2.6%	$58,347	4.3%	$30,170	2.2%	$92,756	6.8%	$15,719	1.3%	$233,229	17.0%
Average	$152,013	$4,026	2.6%	$6,483	4.3%	$3,352	2.2%	$10,306	6.8%	$1,747	1.1%	$25,914	17.0%
Budgeted Percent			2.0%		3.6%		2.0%		7.0%		1.1%		15.7%

PM = Program Manager
CM = Construction Manager
DSA = Division of the State Architect
Misc.= Specialists (e.g., soil engineers, surveyors, wastewater specialists)
AE = Architect and Engineer